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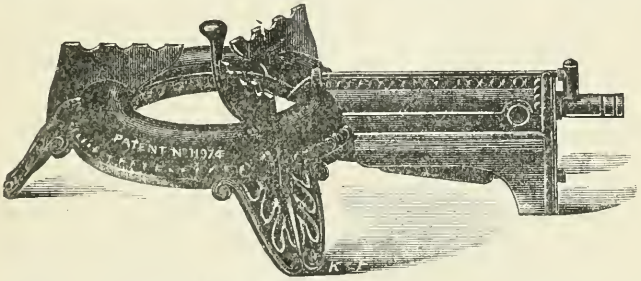

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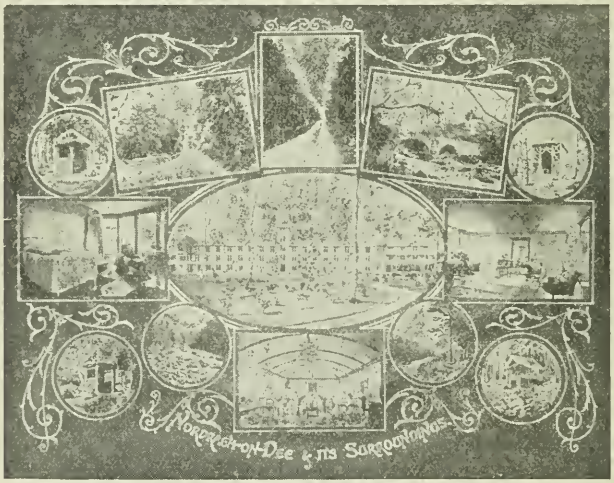

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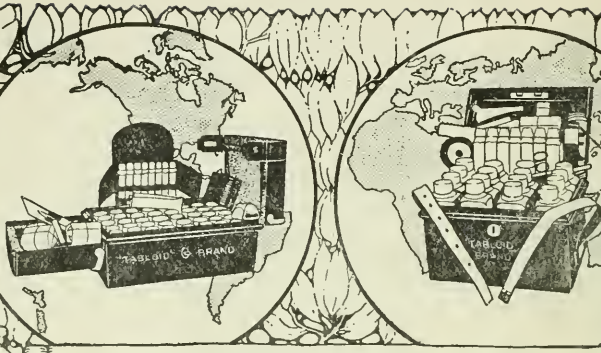

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PART I.

ORIGINAL COMMUNICATIONS.

ART. I.—*On Some Colour-Tests for the Chief Nitrogenous Constituents of Urine.*[a] By WALTER G. SMITH, M.D.; Ex-President, R.C.P.I.; Physician to H. E. the Lord Lieutenant; Physician to Sir Patrick Dun's Hospital.

THE chief object of this communication is to demonstrate an interesting colour test for urea which has lately been discovered by Mr. Fenton, and, in connection with it, I propose also to show some of the older and better known colour tests for the other nitrogenous constituents of urine.

The nitrogenous bodies in urine which respond to colour tests are three in number.[b]

1. Uric acid $C_5H_4N_4O_3$.

Uric acid contains 33.3 per cent. of nitrogen, and its average daily excretion is from 0.5 to 1 grm. Its origin is partly exogenous (food) and partly endogenous (tissue metabolism). Compared with urea, its amount in the urine is less influenced by the proteids of the food.

[a] Read before the Section of Medicine in the Royal Academy of Medicine in Ireland on Friday, March 31, 1905.

[b] Hippuric acid is excreted in appreciable amount, 0.1 to 1 grm. daily, but there is no test for it directly applicable to urine.

The murexide test is so well known and so justly esteemed that it is unnecessary to dwell upon it.

Suffice it to say that the essential factor in its development is the presence of a body termed alloxantin ($C_8H_4N_4O_7$) which is formed along with alloxan, when nitric acid acts upon uric acid.

If a little alloxantin be smeared upon a piece of glass or cardboard, gently warmed, and held over a test-tube containing some liq. ammoniæ, the fine red colour of murexide (ammonium purpurate) is at once produced. [*Experiment shown.*]

But the murexide test requires a little time and care to carry out successfully, and involves evaporation to dryness before adding ammonia.

For uric acid in solution a simple and convenient test was indicated by Offer in 1894 (*Centralbl. f. Physiologie*, 1894, Bd. viii.) It consists in adding a few drops of the yellow solution of phospho-molybdic acid ($H_3PO_4.11MoO_3 12H_2O$) to the urine made strongly alkaline with liq. potassæ (vel sodæ). A rich Prussian blue is developed. [*Experiment shown.*]

Red gravel, or a fragment of a uratic calculus, or, of a gouty tophus, is likewise easily identified by dissolving in liq. potassæ, and adding the phospho-molybdic acid. The blue colour is the result of a reduction process. Neither urea, kreatinin, nor grape sugar affects it; but it reacts with levulose, albumin, and alkaloids.[a]

2. Kreatinin, $C_4H_7N_3O$. contains 37.1 per cent. of nitrogen; daily excretion $\frac{1}{2}$ to 1 grm. It is chiefly exogenous in origin, derived from the kreatin of meat, but is, in part, endogenous, due to metabolism of muscular tissue. It is not known how much of the ingested kreatin is excreted unaltered, or as kreatinin, or as urea. The best mode of demonstrating it in urine is by Weyl's test.

Add a few drops of a weak, freshly prepared solution of sodium nitroprusside ($Na_2Fe(CN)_5(NO).2H_2O$) and then,

[a] This test was accidently re-discovered some time ago in the Chemical Laboratory, T.C.D., by a medical student, Mr. Henley, now in the I.M.S.

cautiously, a little liq. potassæ (v. sodæ). A red colour is produced. [*Experiment shown.*]

Acetone (C_3H_6O), which is sometimes present pathologically in considerable amount, reacts similarly with liq. potassæ.

If liq. ammoniæ be substituted for the liq. potassæ, acetone develops a rich purple colour; kreatinin a clear red.

3. Urea, CH_4N_2O. Contains 46 per cent. of nitrogen.

Its origin is mainly endogenous, and its daily excretion amounts to 30 to 40 gms.

Kossel and Dakin have recently made the striking discovery of an enzyme, termed arginase, which acts upon arginin, one of the simpler cleavage-products of proteids.

Arginase is found in the intestinal mucous membrane, but more especially in the liver, and it splits arginin almost quantitatively into urea and ornithin (*Zeitschr. f. physiol. Chem.*, Bd. XLI., 321).

Hitherto the usual mode of identifying urea was by microscopical examination of some of its crystalline salts, either the nitrate or oxalate. There was no satisfactory colour test for it.

In 1903, however, Mr. Henry Fenton (*Journ. Chem. Soc.*, Feb., 1903) discovered an interesting colour test, which I shall presently demonstrate.

The essential reagent is a compound termed methyl-furil ($C_{11}H_8O_4$), a derivative of furfural. This compound occurs in yellow, lustrous needles, and I am much indebted to Dr. Emerson Reynolds for a specimen of it.

The test will not answer directly with urine until it is evaporated to dryness or nearly so. If a fragment of urea or of the dried urine-residue be ground up with a trace of methyl-furil, and a few drops of strong HCl be added, a rich blue colour is developed. [*Experiment shown.*]

If the substance to be examined is in solution it may be mixed with an alcoholic solution of the reagent, and evaporated to dryness on the water-bath.

0.1 mgm. of urea yields a strongly-marked colour, and, with care, it is easy to detect 0.01 mgm., or even less.

Thio-urea gives a slight greenish colour. The blue colour is characteristic of urea (carbamide) and of mono-substituted carbamides (alkyl group). Acidyl-carbamides do not give the reaction.

With primary *amines* (*e.g.*, aniline), in acetic acid solution, the test produces a brilliant green, without the aid of a condensing agent—*e.g.*, HCl or $POCl_3$.

ART. II.—*Painless Hæmaturia.*[a] By LEVESON-GOWER GUNN, M.D., F.R.C.S.I.; Assistant Surgeon, Adelaide Hospital, Dublin.

THE presence of blood in the urine has for a long time been considered as a cardinal symptom of disease of some portion of the genito-urinary system. It is the symptom which, with perhaps the exception of very acute pain, appeals most forcibly to the patient.

Pain, irritation, and frequency of micturition may be, and often are, suffered for months without seeking medical aid, but should the sufferer pass blood in his urine, and recognise it as such, he will, as a rule, lose no time in seeking advice for the relief of his complaint.

To the medical man, to whom such a case comes, hæmaturia as a symptom will arouse both interest and anxiety—anxiety as he knows only too well what severe and even fatal disease may first show itself by this symptom, and interest in so far as he realises that the diagnosis will, as a rule, call for the closest care and observation on his part—the road to correct diagnoses in genito-urinary disease being beset by many pitfalls.

In the majority of cases hæmaturia will be associated with pain, and although in the genito-urinary tract pain is often referred from the actual lesion as from one kidney to the other, or from the kidney to the bladder, or the bladder to the penis, still the presence of pain will, generally speaking, help in making the diagnosis as to the locality that is bleeding.

[a] Read before the Section of Surgery in the Royal Academy of Medicine in Ireland on Friday, March 24, 1905.

In cases of painless hæmaturia this difficulty of diagnosis is greatly increased, while the necessity for an accurate diagnosis is in no way diminished, as the absence of pain does not mean an absence of danger to the patient.

In the first place we must find out whether the blood is coming from the urethra, the bladder, the ureter, the pelvis of the kidney, or the kidney itself, and if from the ureter or kidney, whether from the right or left side.

This problem once solved, then comes the more difficult one of the cause of the hæmorrhage.

Bleeding from the urethra can, as a rule, be diagnosticated by the fact that the blood may come at times unmixed with the urine; in lesions of the bladder, ureter, or kidney the blood will be intimately mixed with the urine. It is to the differential diagnosis of these cases I wish to call your attention, and to the extent that cystoscopy, kryoscopy, and segregation of the urine will help us in making this diagnosis in the treatment and in the prognosis of such cases.

Five cases of painless hæmaturia have passed through my hands since last August. All had this common symptom, but the cause of the bleeding differed widely in each case. I have been able to verify the diagnosis absolutely in three, almost certainly in the fourth, while in the fifth I have not yet been able to prove whether the provisional diagnosis is correct or not. This case I now lay before you.

Case I.—In August, 1904, I was asked by Dr. Smyly to see Miss E. R., aged fifty-seven years, a patient in the Adelaide Hospital. Her history is as follows:—She has always been strong herself; her family are all healthy; there is no tubercular disease among any of her relations. Patient works in a factory. In June last, 1904, she noticed the urine rather red after a heavy day's work—this happened several times during June and July. She consulted a doctor, who told her she was passing blood, and advised her to go up to hospital. She is a thin, spare-looking woman, with good colour in her face, and looks, as she feels, quite healthy. On examining her abdomen both kidneys could be easily felt; both move freely on respiration; the left kidney,

which feels rather small, and is quite painless, can be readily held down between the examining hands; no other abnormality. Urine 1024, clear, acid; no albumen, blood, or pus. While she remained quietly in bed the urine remained normal. This she said was always the case, the blood only occurring if she had hard work to do, or much walking or standing. She was sent out for a brisk walk, and that evening the urine contained a little blood, but was clear again next morning. The blood was intimately mixed with the urine; no blood casts could be found.

I decided to examine the interior of the bladder with a new cystoscope. This is Professor Nitze's latest design, which differs in many ways from the older forms of cystoscope, and possesses numerous improvements.

The size is only that of a No. 12 English catheter, and renders the passage of the instrument comparatively painless to the patient and easy to the surgeon.

The telescopic part has been enlarged, and gives a larger and brighter field of vision. It is always in focus, and does not require the constant adjustment of the older instruments.

The lamp is larger and brighter, using a current of 12 volts. It is specially packed round with asbestos, rendering it what is technically called a cold lamp. That is, it will burn in the air for some time without heating, and for a considerable time immersed in water without becoming dangerously hot.

By this lamp one of the greatest drawbacks to cystoscopy has been eliminated.

The speedy way the cable carrying the current can be attached, and as readily removed, greatly facilitates the ease with which it may be introduced into the bladder, and lastly, the entire surface of the instrument has been kept as smooth as possible, so that it can be efficiently cleaned and sterilised—a point of no small importance.

There are three conditions that must be present before a cystoscopic examination of the bladder can be satisfactorily carried out:—

1st. The urethra must allow the passage of a No. 12 catheter. This, I think, is obvious.

2nd. The bladder must be capable of containing at

least 4 ozs. of fluid. Less than this amount will not give sufficient room to manipulate the beak of the instrument, and will not allow a proper view of any part of the bladder—the wall of which may easily be injured in the attempt.

3rd. It must be possible to fill the bladder with a clear fluid. To obtain this in most cases is only a matter of patient washing out, but bleeding may be too free or the discharge of pus too continuous ever to allow a proper inspection.

To these I might add, perhaps, that the operator must possess a very thorough knowledge of the normal bladder as seen through the cystoscope—and this differs largely from its appearance in the *post-mortem* room—or the inspection of the bladder will not give him much information.

Cocaïn injected first into the urethra, and later on into the bladder, makes the operation almost painless, and renders a general anæsthetic very rarely necessary.

The patient's bladder held 10 ozs. of fluid, and I was able to examine it thoroughly, and satisfy myself that there was no abnormality there that could cause bleeding. The mouths of both ureters were normal, and clear urine issued from each. I examined the bladder again after she had taken some exercise, and found, as I expected, blood coming from one ureter; the urine on the right side came in a clear efflux, while that from the left ureter was clouded with blood. The appearance of the mouth of the ureter was against the presence of a stone in the ureter or in the pelvis of the kidney, and an X-ray photograph confirmed this, showing no signs of stone. The diagnosis lay between a tubercular deposit in the left kidney, a new growth in the pelvis or in the kidney itself, an angiomatous condition of one of the renal papillæ, or that the bleeding might be due to the mobility of the kidney. The absence of either fever, pus, or tubercle bacilli was against tubercular disease; the small size, smooth surface, and absence of pain was against a new growth in the kidney. I passed a carefully sterilised catheter (by means of this cystoscope) up the ureter into the pelvis of the kidney; this caused no bleeding, as it would almost certainly have done had there been a villous growth in either ureter or pelvis. I believe

that in this case the bleeding was due to enlarged blood vessels in the renal papillæ, which probably bleed only when the kidney drops after extra exertion, this misplacement probably causing some engorgement of the vessels. I suggested exposing, exploring, and, should there be no sign of a new growth present, fixing the kidney. The patient was unwilling to have any operation done unless I considered it absolutely necessary, and, under these circumstances, I sent her home with orders to report herself every six months. I saw her again in February, 1905. Her condition is unchanged, and her general health is excellent.

In a case of this kind one must always remember the possibility of malignant disease of the kidney starting in this way, and I have given a guarded prognosis in this case, and will urge that the kidney be at once examined if it shows the least sign of enlarging.

Case II.—Mr. H., aged fifty-one years, a commercial traveller. I was asked to see this patient in September, 1904, by Dr. Bewley. His family history is good; he has had no illness of any importance prior to April, 1904, when his present trouble began. He was staying in London at the time, and was greatly startled one morning to find a quantity of blood passing in his water. He sent at once for a doctor, who kept him in bed for a couple of days. The bleeding stopped in 24 hours, and he felt none the worse. At intervals of from two to six weeks these attacks recurred, sometimes preceded for a few hours by a feeling of malaise, but as a rule coming on without any warning. In August the bleeding was very severe, lasting for nine days, and leaving the patient very weak. Another attack occurred in September, when I was asked to see him. Patient is exceedingly pale, and has evidently lost a great deal of blood. He feels weak, but has not lost weight; urine sp. gr. 1012; acid; contains a quantity of blood; no pus; some flat epithelium. He has no pain anywhere, and nothing abnormal can be felt. He says he has been a rather heavy spirit drinker for some years.

I washed out the bladder and examined it with the cystoscope; it appeared quite normal. The mouths of both ureters were normal, and clear urine was coming from the right; from the left ureter clots of blood, moulded to the shape of the ureter, were being forced out with gushes of blood-stained urine. These ureteral blood-casts were lying coiled up in the lowest part of

the bladder. X-ray photograph showed, as I expected, no stone. With rest in bed, and large doses of chloride of calcium, the hæmaturia stopped in a few days. The urine then showed sp. gr. 1012; acid; trace of albumen; a few granular tube-casts.

I believed the trouble in this case was either a new growth in the kidney or one of these rather rare cases of interstitial nephritis which may bleed freely. It was obvious that active measures must be taken to prevent another hæmorrhage, as the patient was now so weak that it seemed probable that a further bleeding might prove fatal. As it is a matter of great importance to know the functional soundness of the patient's other kidney, I separated his urine with Professor Luy's segregator, which fits into the floor of the bladder, dividing it into two compartments by this rubber septum, and through these lateral openings collects in these glass tubes the urine as it flows from either ureter.

The urine so obtained from the right kidney I examined by kryoscopy, the principal of which is briefly as follows:—

The kidneys, by their osmotic power, separate from the blood the salts dissolved in the urine Should this power be impaired this separation will not take place, but as the molecules continue forming in the body and passing into the blood it follows that the total amount in the blood will be increased, and in the urine will be diminished.

The molecular concentration in the blood will be too great, and that in the urine too low.

The greater the molecular concentration in the urine separated by the kidney the lower the temperature required to freeze the fluid will be.

By kryoscopy we can measure the concentration of the blood and of the urine in a rapid and fairly accurate manner, and by comparing the two results gain much information as to the functional activity of the kidney.

The apparatus I use is Bergmann's. It consists of a delicate thermometer graduated to 1-100ths of a degree Centigrade running from 0 to – 5 degrees. This thermometer passes through a rubber cork into about 15 c.c. of

the mixture to be frozen. This is surrounded by a freezing mixture of ice and salt.

The fluid is kept well mixed by means of a platinum mixer until it freezes solid right through. The height at which the mercury stands is read off, the fluid is allowed to thaw, and the experiment is repeated again.

Blood normally freezes at $-0.56°$; an increase of this freezing depression point to $-0.58°$ or lower shows renal insufficiency.

The depression freezing point of the urine is not nearly so constant as that of the blood, and varies in health from $-1.2°$ to $-2.2°$. If it should rise to 1 deg. below zero or higher than this, it shows that both kidneys are diseased. For as long as either kidney has a sufficient amount of healthy parenchyma left to separate these substances from the blood, there will be no alteration from the normal freezing point of either blood or urine.

It is possible then by this method to estimate the functional capacity of both kidneys, and by the use of the segregator or the ureteral catheter to estimate separately the powers of each. It is claimed that this alteration in the freezing point is present in cases of renal mischief long before any general symptoms of kidney insufficiency occur.

There are two conditions which may cause the urine to freeze at a higher point than normal, but are still compatible with a healthy renal epithelium:—

1st. If there has been a very large intake of water.

2nd. If a profound anæmia is present.

There are four conditions also which may cause the blood to freeze at too low a point without kidney insufficiency being present:—

1st. Increased abdominal pressure, especially when such an increase is due to the presence of any large abdominal tumour.

2nd. If the blood is not receiving a proper supply of oxygen from the lungs.

3rd. If the patient's diet does not contain a good supply of carbohydrates.

4th. One-sided renal pain, due to a stone or tumour, may cause a temporary insufficiency in the other kidney.

Some of these conditions can be easily rectified, the intake of water can be regulated for some time before the examination is made. If there is any doubt about the blood receiving enough oxygen from the lungs it is not a difficult matter to allow a little oxygen to pass through the test tube before it is frozen. A liberal carbohydrate diet can be arranged for, and, as a rule, it will be possible to choose a time during which the patient is free from pain to make the necessary examination.

The two remaining conditions—that of profound anæmia and increased abdominal pressure resulting from a tumour—cannot probably be got rid of, and in these cases abnormal kryoscopic readings must be accepted as of doubtful value.

In no case can a single estimation of the urine alone be taken as of much value, but if done in conjunction with the blood, and especially if abnormal readings are obtained on several occasions, its significance is then of the greatest importance.

In this case, although a severe anæmia was present, the freezing point of the blood, and of the urine from the right kidney, was normal, showing that there was no insufficiency of this side. In September, 1904, I removed the left kidney with some difficulty, as it had almost no pedicle, Mr. Gordon kindly assisting me. The kidney showed marked interstitial fibrosis, with numerous small hæmorrhages scattered through its substance. Sixteen ounces of urine passed the first day, and this amount has steadily increased until now the patient passes daily from forty to fifty ounces of urine; it is free from albumen, and there has been no bleeding since the operation, nor any sign of renal insufficiency.

Case III.—Mrs. M. C., aged 47 years, a professional nurse. I was asked by Dr. Purefoy to see this patient in October, 1904. About a month before this date the patient noticed her urine dark in colour on several occasions — always, if from any cause, she had been unable to empty her bladder for some time. She has had some frequency of micturition during the day, and has been obliged to get up and empty her bladder

at least once during the night. This has been going on for over a year. Dr. Purefoy, to whom she showed the urine, told her that she was passing blood in it, and sent her on to me. She is a stout, healthy-looking woman, says she has never had any illness, and feels well at the present time. She has no pain, the frequency of micturition does not seem to trouble her, but she is nervous about the hæmaturia: urine sp. gr. 1022; alkaline; a few pus cells; some diplococci, and a few short thick bacilli; no blood.

I washed out the bladder, which held only six ounces with comfort, and examined with a cystoscope. The whole surface of the bladder was slightly reddened, vessels were enlarged, and here and there small tags of lymph were hanging from it; it presented the appearance of a chronic cystitis. The mouths of both ureters appeared slightly reddened, but were otherwise normal; clear urine came from each. Scattered over the trigone round the sphincter and the mouth of the left ureter are a number of small raised ulcers, some in process of healing, others breaking down. On injecting a little more fluid into the bladder, and so stretching the floors of these ulcers, several of them began to bleed, and so explained the cause of the hæmaturia. The ulcers were all superficial, and were, I believe, due to a secondary tubercular infection from one or other kidney. Primary tuberculosis nearly always occurs as a single large ulcer or as scattered sub-mucous patches. Secondary tuberculosis, on the other hand, often occurs as multiple small ulcers, sometimes grouped round the mouth of the ureter, through which the infection has come, the mouth of the ureter itself being often ulcerated. Neither ureter was ulcerated in this case, but from the grouping of the lesions I would suspect the left kidney to be the one at fault. I examined the urine several times, but could not find tubercle bacilli. I have since learned from her doctor that two of her children are tubercular, and that she herself had a smart attack of hæmoptysis just three years ago, so I have little doubt but that the diagnosis of secondary tuberculosis is correct. The ulcers have improved considerably under treatment, and there is no sign of fresh infection having taken place.

Case IV.—Mr. M., aged forty-seven years, a retired civil servant. I was asked in November, 1904, to see this gentleman in consultation. He gave the following history:—He has always been rather delicate, and has lived a good deal abroad. In the

beginning of 1904 he first passed some blood in his urine; he had some frequency, but no pain. His doctor sounded him twice for stone, but with a negative result. These attacks of hæmaturia continued up to the time I saw him in November. They occurred at varying intervals, causing no pain, and giving no clue to the locality that was bleeding. The bleeding often lasts only a few hours, and never for more than a couple of days. The intervals during which the urine has been free from blood have varied from a few days to six or seven weeks.

Patient is a spare man, with a rather sallow complexion, but does not look anæmic. He feels weak, and thinks he has lost some flesh during the past year. On examining the abdomen one could see a marked fulness in the left hypochondriac region, and could feel with ease the edge of the spleen projecting a hand's breadth below the ribs. This enlargement seemed to extend back into the flank and mask the kidney. We felt sure that the spleen was much enlarged, but were not at all sure of feeling the left kidney at all.

I washed out his bladder and examined it carefully. Unfortunately, about an hour or two before I arrived the bleeding had stopped, and the urine was now quite clear. The bladder walls were quite healthy. A small pedunculated adenoma grew from the back of the middle lobe of the prostate; its surface was unbroken, and it could not be causing the bleeding. The mouths of both ureters appeared normal, and I saw clear urine flow from each.

This examination proved that the hæmorrhage was not vesical. We suspected that the left kidney was at fault—either that there was a growth in the kidney itself or that its circulation was interfered with by the pressure of the enlarged spleen. We decided to do nothing until the next hæmorrhage occurred, when I hoped to be able to ascertain definitely from which side the bleeding was coming. Urine was pale; sp. gr. 1018, acid; contained a trace of albumen; a few white cells, and a good deal of flat epithelium. Three weeks later bleeding recurred. The patient was now complaining of a sense of fulness in his left side and a constant desire to pass water. The swelling in the left side seems to have increased considerably in size. I passed a segregator into the bladder; there was an abundant flow of urine from the right ureter, while from the left only a

few drops of blood-stained urine came. It was decided to explore the left kidney at once. Next day I assisted at an operation on his left kidney; we found it enlarged to fully three times its normal size, and obviously the seat of a new growth. The kidney was removed, and the growth proved to be an adenoma invading the body and pelvis of the kidney. It is interesting to note that the spleen was not appreciably enlarged, and had evidently been pushed forward by the renal growth.

Case V.—Mr. H., aged sixty-four years, a retired government official. He was sent to me by Dr. Wallace Beatty, in January, 1905, and gave me the following history:—He has always been a strong healthy man. Some two years ago he began to have some frequency and increasing difficulty in passing his water—in fact the usual train of symptoms that follow a senile enlargement of the prostate. Two months before I saw him he had a smart attack of hæmaturia, lasting for three days; he had no pain, and could assign no cause for its onset. A second rather less severe hæmorrhage had just ceased when he consulted me. On rectal examination the prostate could be felt generally enlarged, the right lobe feels very hard; the seminal vesicles were hard and larger than normal. Urine, 1024; acid; trace of albumen; a few white cells, and some cocci; no tubercle bacilli. I examined with a prostatic cystoscope, and found the bladder walls were healthy; the enlarged prostate could be well seen standing up into the bladder. From the back of the middle lobe sprang a red nodular growth, slightly pedunculated, covering the left ureteral orifice, and invading the bladder wall. I believed this growth to be a carcinoma.

Sir Charles Bali saw this case with me and agreed with this diagnosis, and with his assistance I removed the growth, a portion of the bladder wall, the enlarged prostate, and seminal vesicles through a supra-pubic incision. Microscopic examination of the part removed confirmed the diagnosis. The case has done well, and he is now only troubled with some loss of control if he tries to hold his water for more than two or three hours at a time, and this, I hope, will improve.

This paper has, I fear, already been over long, and I cannot now venture to discuss all the causes of painless hæmaturia. My object in bringing these cases before your notice at present is to try and demon-

strate that these methods of cystoscopy, kryoscopy, and segregation, although by no means infallible, yet will materially aid in forming a correct diagnosis in this difficult class of urinary cases.

ART. III.—*Some Miscellaneous Clinical Experiences.*[a] By R. TRAVERS SMITH, M.D., F.R.C.P.I.: Visiting Physician to the Richmond, Whitworth, and Hardwicke Hospitals.

CASE I.—T. J., a widow, aged thirty-eight, of intemperate habits, was admitted to the Whitworth Hospital in October, 1903, where she remained under my care till her death in November, 1904. She complained on admission of swelling of her feet and abdomen, and of pain in her right hypocondrium. She had previously been subject to bronchitis. She had had four children, one still-born, the other three died in early infancy.

Patient was well nourished, but rather pale. Conjunctivæ of a yellowish brown hue. The abdomen was distinctly enlarged, the lateral superficial veins evident; it was very easily palpated, as the muscles were weak and the recti were far apart. The liver was found to be uniformly enlarged, extending down to the umbilicus, abnormally tough in consistence, the anterior edge feeling very sharp. The spleen felt double the normal size at least, its rounded border contrasting markedly with the sharp edge of the liver with which it was in contact. The intestines were flatulent. There was no ascites present. The urine was normal, and contained no bile pigments. A blood examination showed moderate anæmia, but no other abnormality. The lungs were slightly emphysematous. The apex of the heart was displaced a little outwards. Over all the precordial region a systolic murmur could be heard, its point of maximum intensity obviously being the second left intercostal space, half an inch from the edge of the sternum. This murmur was not affected by respiration; it became slightly more distinct on exertion. The murmur could be traced only a short distance from the apex into the axilla. This murmur retained these characters till death. The feet were slightly œdematous. The diagnosis entertained were:—

(*a*) Passive congestion of liver and spleen, the result of failing

[a] Read before the Section of Medicine in the Royal Academy of Medicine in Ireland on Friday, March 31, 1905.

right ventricle. This was excluded by the absence of any considerable enlargement of the heart, a normal pulse, and absence of other signs of passive venous congestion.

(*b*) Spleno-medullary leukæmia or Hodgkins' disease, excluded by the blood examination and the absence of enlarged glands.

(*c*) Biliary cirrhosis excluded by the absence of jaundice or of its history.

(*d*) Malignant disease excluded by the regularity of the enlarged liver and spleen, and the want of any evidence of a primary form. The diagnosis finally arrived at was "hypertrophic stage of alcoholic cirrhosis."

During the patient's stay in hospital, on three or four occasions subcutaneous and sub-conjunctival hæmorrhages occurred apparently spontaneously. Thrombosis supervened in the left femoral vein. Attacks of vomiting were occasionally troublesome. The liver became, as time went on, slightly smaller in size and less smooth on the surface. Severe pain in the right shoulders was a frequent complaint. Three weeks before death I had carefully examined the patient's abdomen one morning, and had felt the large firm spleen as usual. Within an hour afterwards violent hæmatemesis occurred. On then examining the abdomen the spleen could hardly be palpated, so much reduced in size and softened had it become. The liver, I am inclined to think, was also reduced in size, but this point was doubtful at the time. During the next few days the spleen gradually regained its usual large size. This diminution in the size of the spleen after hæmatemesis can readily be explained on the supposition that the bleeding occurred from some of the veins along the greater curvature of the stomach which are tributaries of the splenic vein. Hæmatemesis recurred several times, and was the immediate cause of death. Only in the last two weeks of life as a terminal condition did ascites develop. Average spleen, 171 grammes; average liver, 1,500 grammes.

Post-mortem, made six hours after death:—All parts very anæmic. Abdomen contained a lot of clear fluid. Liver weighed 1,030 grammes, typically hob-nailed; adherent to diaphragm. Spleen enlarged, 390 grammes; congested, but rather soft. A single red infarct in its anterior border. A small accessory spleen. The edge of the great omentum was adherent to brim and contents of pelvis, the possible cause of thrombosis of left femoral

vein. The stomach contained blood, but no point in stomach or œsophagus could be located as its source, though death resulted from hæmorrhage. The kidneys showed signs of early chronic interstitial nephritis.

The surface of the heart showed numerous "milk spots." The musculature was in a state of fatty degeneration, the musculi papillares of the left ventricle showing fatty striation. The left ventricle was somewhat hypertrophied and dilated. The cusps of the mitral valve were thickened and shrunken at their free edges, and their chordæ tendineæ were shortened; mitral orifice was dilated, admitting three fingers with ease. The right side of the heart was normal in size, as were *its* valves. The aortic valves were normal; lungs, emphysematous and œdematous.

The points of interest in the case to me were:—

The spontaneous hæmorrhages, as in hypertrophic cirrhosis.

The reduction in the size of the spleen after hæmatemesis, proving the congestive origin of its enlargement.

The very late appearance of ascites.

The opportunity of verifying *post-mortem* that mitral regurgitation can cause a murmur, with its point of maximum intensity at the tip of the left auricle—*i.e.*, in second left intercostal space, half an inch from sternal edge.

Case II.—J. D., aged forty, admitted to Whitworth Hospital on December 17, 1904, where she remained till her death, six weeks later. A month before admission she complained of vomiting, swelling of the abdomen, and cough. A fortnight later severe diarrhœa came on. On admission the abdomen was much enlarged from flatulent distension, a circumstance which prevented the accurate mapping out of the liver and spleen. The lungs showed evidence of slight chronic bronchitis. The bowels acted six to ten times per diem. The skin and conjunctivæ were somewhat discoloured. Urine contained a slight trace of albumen. In the course of a fortnight some ascites could be detected, and coincidently the diarrhœa ceased. Three weeks later it became necessary to tap the abdomen, and 105 ounces were drawn off. The cells in the fluid were mostly desquamated endothelium. A week later tapping again became necessary; then vomiting became severe, and death ensued from exhaustion and heart failure.

Post-mortem.—A small, typically hob-nailed liver was found and an enlarged congested spleen. The stomach and transverse colon were densely adherent to the gall-bladder, the walls of which were thickened.

The points of interest in this case were :—The marked flatulence, the late appearance of ascites, and the course of the temperature. This temperature, the distended intestines which marked the real size of the liver and spleen, the violent diarrhœa, at first led to the erroneous diagnosis of some form of ulcerative enteritis, probably tubercular.

Case III.—A country girl, aged thirteen, when admitted to hospital, was found to be suffering from ascites, enlarged superficial abdominal veins, uniformly enlarged liver and spleen. The diagnosis of alcoholic cirrhosis of the liver was arrived at, but on questioning the patient as to what stimulants she used she declared herself an absolute teetotaller. On further investigation the fact was ascertained that for two years before admission she had almost constantly been taking a medicine of herbs concocted for her by her mother. What the indications for this mixture were I could never precisely learn, but its composition was a decoction of dock leaves with whisky generously added. This patient died in about a month from admission. An autopsy revealed a hob-nailed liver with its usual train of morbid anatomical findings.

Case IV.—R. W., a farmer, aged twenty-one, previously healthy, and always temperate, in July, 1904, first noticed his urine becoming very dark in colour. At about the same time he noticed his eyes to be of a yellow colour, his skin yellow and itchy. After his skin got yellow he suffered from occasional attacks of vomiting, acid eructations, and a slight dull aching in the right hypochondrium. He was admitted to hospital four months later, in November, 1904. He was then found to be well nourished and muscular. Moderate jaundice was present. The liver was thought to be enlarged on percussion, yet could not be palpated. The spleen was slightly enlarged, it was also thought, but a muscular abdominal wall prevented it from being felt distinctly. Pulse was 60; temperature subnormal. Urine dark and containing a quantity of bile pigments. The stools

were acholic, abundant and clay-coloured. The bowels acted regularly. Blood was normal. By the end of December patient left hospital of his own request, between five and six months after the onset of jaundice. By that time the liver could be made out to be distinctly and uniformly enlarged by palpation. The spleen also could readily be felt enlarged. There was no ascites. The jaundice was as intense as on admission. The stools had, as a rule, remained acholic; occasionally they contained some bile colouring.

I made the diagnosis of cirrhosis of the liver on the following data—Jaundice persisting nearly six months, a gradual and uniform enlargement of the liver and spleen. Though such a condition of the stools as in this case more frequently indicates obstruction of the main bile duct than obstruction of a multitude of smaller bile ducts as from biliary cirrhosis, yet others have found acholic stools in association with hyperthropic cirrhosis. This diagnosis was greatly strengthened by the evident increase of the size of the spleen—a most important point.

Case V.—M. H., aged fifty, by occupation a butler, was admitted to the Whitworth Hospital complaining of attacks of violent pain in the left lumbar region extending into the left groin. He stated that, with the exception of constipation, he had always enjoyed good health till about three months previously. From that date he began to experience some pain in the left lumbar region, tending to radiate towards the middle line in front, but as it was not severe he did not seek medical aid. Four days before admission he got the first attack of violent pain which made him feel extremely ill, and incapacitated him from all work. The attacks repeated themselves several times before admission; on each occasion the pain radiated to the groin, and was most intense in that situation. On admission the patient was observed to be pallid, and wore an expression indicative of suffering. On examining the abdomen by palpation a tumour was detected in the left iliac fossa. Tracing it inwards from this point it extended almost to the middle line, whilst in an upward direction it extended under the arch of the ribs, but receded from the middle line. The right border of the tumour was well defined, especially below, where it felt firm and almost nodular. The left border of the mass could not be limited by palpation. Doubtful fluctuation was detected, but no pulsation whatever. On

percussion the tumour was absolutely dull, its area fusing with those of the left kidney and spleen. Dulness was also present at the base of the left lung, behind where the breath sounds were diminished. These signs gave rise to the suspicion that the tumour, whatever its nature might be, was pressing the left cupola of the diaphragm upwards. The left loin did not visibly bulge, though the skin there was œdematous. The patient was unaware of the presence of the tumour, so could offer no clue to the duration of its existence. No signs of aortic aneurysm, either thoracic or abdominal, were detected, despite careful examinations with that object in view. Blood films were made which negatived a suspicion of spleno-medullary leukæmia. The urine was normal.

The diagnosis considered most probable was renal calculus leading to hydronephrosis of the left kidney, although the urine contained neither albumen, blood nor pus. The patient lived for seven days in hospital, each evening getting a violent paroxysm of pain relieved only by morphin. After each attack of pain it was noted that the swelling had extended and was tenser than before. Under these circumstances I advised the patient to submit to an exploratory operation. This he refused to do. He died a few hours later, just as the proposed operation would have been undertaken had he submitted.

Post-mortem.—An aneurysm about the size of a small fist, constricted in its middle by the aortic aperture in the diaphragm, was found. It had ruptured into the abdomen extra-peritoneally. An enormous amount of blood clot was found stripping the peritoneum from the post-abdominal wall down to the left iliac fossa, from the under surface of the diaphragm, and even from the left anterior abdominal wall. The left kidney was embedded in the clot, otherwise it was normal. The blood had not penetrated between the spleen and its peritoneal capsule. Nothing else abnormal was found of any note.

The interest of this case, apart from the interest always attaching to an autopsical correction of a clinical diagnosis, lies in the fact that a man could survive for eleven days with a ruptured aneurysm of the abdominal aorta, and for part of this period be able to get about.

A CASE OF PAROXYSMAL TACHYCARDIA.

Case VI.—P. R., a labourer, aged sixty, was admitted to the

Whitworth Hospital in December, 1904. He stated that four years previously he began to suffer from attacks of palpitation of his heart. They occurred once a month at first, lasting about two hours, but gradually became more frequent and of longer duration. These longer attacks were often interspersed with ones of momentary length. Patient stated that the attacks always began with a burning sensation in the neck, which rapidly travelled to his heart, when instantly his heart began to beat violently and rapidly. He was conscious of the great rapidity. The attacks were always accompanied by lightness in the head. Having had good results in another case of paroxysmal tachycardia by administering bromide of potassium, I at once put this man upon the drug. During his stay in hospital on this occasion the attacks were all short, and gradually grew less frequent, finally disappearing. How much of his relief was due to the bromides and how much to the rest and good hygiene it is difficult to estimate. He left hospital without giving me the opportunity of personally observing an attack. The resident staff on several occasions were present during attacks, and counted the heart beats at something over 200. As a rule, the attacks were so short that they were over before any one could be summoned to his bedside.

The patient returned to hospital early in February of this year (1905), and stated that his heart was as bad as ever again, the attacks having again become longer and more frequent. Two days after admission, on visiting him one morning at 11 a.m., I made the following note :—Patient states that yesterday afternoon he had several short attacks of palpitation. At 8 p.m. the attacks became continuous, lasted all through the night, and only allowed one hour's sleep. He complains of pain below the left nipple and a burning sensation behind the sternum. He says his head is light, but he is able to read a book. He looks calm, a little paler than usual, but appears in no distress. Extremities are warm and of good colour. On looking across his chest, uncountably rapid vibratory movements are seen of the precordial and epigastric areas. The veins of the neck are not distended, and do not fill from below. On counting the rapidity of the heart beats with a stethoscope they are 212 to the minute. Only the first sound can be heard at the apex, very short, yet distinct. At the base a very feeble second sound can be heard after the first sound. That the heart is really beating at this enormous

rate is proved by the facts that the carotid pulse can be counted at 212, and precordial pulsation (more difficult to count) at something over 200. In the radial arteries only 86 *distinct* pulse beats can be counted per minute ; they vary in force more than in rhythm. It is a matter of doubt whether feeble, rapid, indefinite beats may not be felt between the larger ones. The pulse in the brachial and femoral arteries is of the same character as that of the radials. Whilst percussing the heart to try to map out the area of deep cardiac dulness the patient said—" You will find my heart slower now." On counting with the stethoscope, immediately the heart rate was found to be 96, and a minute or so later 84. The storm had suddenly passed, the rapid and violent heart's action subsiding in the usual manner by a sensation travelling from the nipple region to the neck. It is my belief that the heart was somewhat dilated during this attack. The attack lasted 15 hours. The patient was now given bromides again. For the next few days a few short paroxysms occurred, but for the last nine days none have appeared. He is still in hospital.

Between the attacks the heart's rapidity is usually about 80. The heart cannot be demonstrated to be enlarged. The impulse cannot be felt. The sounds, though clear, are feeble, even allowing for a thick chest wall, and a prolonged rest in bed. The arteries are sclerotic, but not markedly so. The urine is normal.

In my opinion the paroxysmal tachycardia in this case is not purely of nervous origin, but is associated with some degenerative change in the myocardium.

ART. IV.—*A Case of Tuberculosis of Lungs and of Knee treated by Professor Denys' Tuberculin.*[a] By FRANK J. DUNNE, B.A., M.B., R.U.I.; Physician to the South Dublin Union.

The patient, a girl, aged thirteen years, was admitted to the Royal City of Dublin Hospital, November 2, 1903, suffering from a tubercular abscess of the front of the knee, probably starting in the prepatellar bursa ; it was opened and scraped by Mr. Jameson Johnston.

[a] Read before the Section of Medicine in the Royal Academy of Medicine in Ireland on Friday, May 19, 1905.

In January, 1904, when the patient came under the care of Dr. Stoney, there were two long subcutaneous sinuses on the front and inside of the knee; the joint was not involved. The whole area was dissected out and healed up, and she was discharged well on January 24, 1904. About a month after leaving hospital she knocked her knee against the side of the bed, and it broke out again. She attended the dispensary to have her knee dressed frequently. In the beginning of August last she came back to the dispensary as the site of operation had broken down, and there was a large ulcerated area. She was again admitted to the Royal City of Dublin Hospital on August 23. There was great pain on moving the knee, and Dr. Stoney was of opinion that the lower end of the femur was diseased (dead bone being felt at the bottom of the wound), and also the joint. Excision or amputation was discussed, but as she had a very bad cough and the left lung was found to be solid, nearly from apex to base, with tubular breathing and crepitation, and the right lung crepitating for a hand's breadth below the clavicle, and as tubercle bacilli were found in her sputum, it was decided that the disease was too far advanced for operation. She was sent to the South Dublin Union on September 9, 1904.

On admission to the Children's Infirmary, South Dublin Union, there was a large deep ulcer on the anterior and inner surface of the knee, with considerable swelling and inflammation, both above and below the joint, and free discharge. The knee was very painful even when at rest. Temperature, 101°; pulse, 100; respirations, 30. Patient was coughing a good deal and sweating profusely at night. The body was thin and wasted. The right lung was slightly dull on percussion, and crepitating freely for about three finger breadths below the clavicle. Left lung was dull on percussion down to 4th rib in front, and about two inches below inferior angle of scapula behind, and over this area there were crepitations, tubular breathing, and moist rales. There was copious expectoration, and it was loaded with tubercle bacilli and cocci. The knee was poulticed for a few days, and then treated throughout with iodoform emulsion. The discharge lessened, and inflammation subsided, but there was very little attempt at healing made until after the injections were commenced. The temperature was markedly hectic in type for the first four weeks, ranging from 99° in the morning to 101° at night, and several times touching 102°. After this there was

generally 1° difference between morning and evening. About the middle of October a slight redness and swelling appeared above the ankle, and early in November a small patch of ulceration at inner ankle and heel made its appearance, while the whole leg, from knee to ankle, became red and swollen. When the little ulcer commenced to discharge the redness and swelling subsided to some extent.

Present condition of patient:—Neither cough, expectoration, nor night sweats. The right lung has quite cleared, is resonant, and the breath sounds are normal. The left lung is slightly dull in percussion, giving about the same note as a thickened pleura. Breath sounds are good all over, except a small area close to inferior angle of scapula, where the dulness is more marked, and slight tubular breathing and faint crepitation may still be heard. The knee presents a healthy scar, being adherent to the bone for a space of about 1½ inches. Movement is perfect, and the patient can run and walk without any trouble.

I commenced the tuberculin injections on November 30. My first injections were made at intervals of four days, the temperature being taken five times daily. The first four injections were practically without visible result, except to steady the temperature, which now frequently touched or went below normal. The cough and night sweats both became less frequent. For nineteen injections the temperature was normal at some period of the twenty-four hours, with the exception of two days, though very frequently the variation in the twenty-four hours was as much as 2 degrees. From the 18th of February to the 23rd of March—the 20th to 25th injections—the temperature rose above normal only on seven days. From March 29th to April 4th I gave the 26th and 27th injections, both of which were followed by a rise to 100°, lasting for only a few hours. Since the 6th of April there has never been a rise of temperature beyond 98°, though I have given one cc. of No. III., which is pure undiluted tuberculin.

The small ulcer which I have mentioned at the inner ankle healed up rapidly, and was quite well by the end of December. The knee healed very rapidly up to about the same time, when there was a small patch, about the size of a sixpence, which kept oozing until the end of January. The girl was kept in bed as little as possible, and when the days were fine I had her carried out to the open air, though she felt the cold pretty acutely at first.

As regards treatment.—She has been on an emulsion of cod liver oil and syrup of calcium lactophosphate from the start, and ordinary cough mixtures and atropin and zinc pills up to the time I commenced the injections. Since the 1st of January she has had no medical treatment except the emulsion. The weight at the end of November was 4 stones 8 pounds, and it has gradually increased to 5 stones 11 pounds on May 15th. The sputum in November was crowded with tubercle bacilli and cocci in chains and pairs; in December, few bacilli, numerous cocci; in January, bacilli much more numerous, few cocci; in February, very few bacilli, and, since then, no tubercle bacilli have been found in repeated examinations.

Effect of 33 tuberculin injections on temperature in case under discussion:—On 11 occasions there was a rise in temperature within 48 hours, and usually within 24 hours; on six occasions 1°, and on five occasions 2°. On 4 occasions there was a fall in temperature—once 1°, twice 2°, and once 3°—within 24 hours. On 18 occasions there was no appreciable change of temperature.

I have given altogether 333 injections in various tubercular cases, and after 72 of these there was a rise in temperature within 48 hours, once 4°, five times 3°, eight times 2°, and 56 times of 1°.

There was a fall of temperature after 50 of the injections, four times of 3°, six times 2°, and 40 times of 1°. After the remaining 211 injections there was a rise or fall of temperature of less than 1°.

I have made all my injections into the muscles of the back, a little below and between the scapulæ. In no single instance has a skin abscess or sore of any description arisen. The only local effect was some slight redness and thickening at the site of puncture.

Tuberculin is a liquid obtained by filtering through porcelain a culture of the bacillus of Koch developed in broth (bouillon de viande), with the addition of glycerine and peptone after the usual proportions.

It is an absolutely limpid liquid, deprived of all living germs, but charged with the products of the secretion of the microbe.

It exists in the following strengths:—

T. III. tuberculin, pure, non-diluted.
T. II. ,, ,, diluted $\frac{1}{10}$.
T. I. ,, ,, ,, $\frac{1}{100}$.
T. O. ,, ,, ,, $\frac{1}{1000}$.
T. O. $\frac{1}{10}$,, ,, ,, $\frac{1}{10000}$.
T. O. $\frac{1}{100}$,, ,, ,, $\frac{1}{100000}$.
T. O. $\frac{1}{1000}$,, ,, ,, $\frac{1}{1000000}$.

This graduation in strength enables the operator to very gradually increase the dose according to the amount of reaction exhibited by the patient.

I feel that this record of an interesting case, and of a means of treating tuberculosis new to medical science in Ireland, would be incomplete if I failed to express my gratitude to Professor J. Denys, of Louvain, who not only placed his tuberculin at my disposal, but also has at all times most promptly replied to my questions, explained my difficulties, and given me his advice about my various cases.

I am also indebted to Dr. R. Atkinson Stoney for his notes on the case, as also for his testimony at the Academy as to the condition of the patient when leaving the Royal City of Dublin Hospital.

ART. V.—*An Unusual Case of Difficult Labour.* By J. SPENCER SHEILL, L.R.C.P. & S.I.; Assistant Master, Coombe Hospital, Dublin.

The following clinical record is of practical interest:—

Mrs. M'D., 14-para., aged forty-three, was sent to me by Dr. Richard Shaw, of Ranelagh, as a case of hydramnios, with malpresentation of the fœtus. After admission to the labour ward of the Coombe Hospital the following facts were elicited on inquiry:—The patient stated that she was pregnant, and she believed that she had passed her full time about a fortnight previous to admission. She had "felt no life" for the past few weeks, and she found that—to use her own words—she was "unusually helpless" whilst carrying this child. She informed me that the previous pregnancies had been uncomplicated, save the last one, after which confinement she got "fever," and "an abscess formed inside her." The "abscess broke near her groin,"

and, although her convalescence was tedious, she eventually recovered completely. A scar in the region of Poupart's ligament on the right side gave colour to her statement, and I think it probable that she had had suppuration following pelvic cellulitis. On examination the abdomen was found to be greatly distended—the distension being due to hydramnios of a very marked degree—and it was with difficulty that the fœtus could be palpated, lying directly in the transverse position, but freely movable. The fœtal heart could not be heard. *Per vaginam.*—The os uteri was found sufficiently large to admit two fingers, and to be very soft. No fœtal part could be reached. The patient's left leg was markedly œdematous, as was also the abdominal wall in its lower third. Vague pains of a very slight degree were experienced by the patient, and some bulging of the membranes occurred coincidently with each pain. Under these circumstances I decided to allow a portion of the liquor amnii to drain off, and to turn the child into a favourable position. Accordingly, passing my whole hand into the capacious vagina and two fingers into the os, by means of a stilette I punctured the membranes as high up as possible, Keeping my hand in the vagina, I allowed to drain away, very slowly, a large quantity of fluid; unfortunately the membranes tore very soon, and a sudden rush of liquor amnii was prevented only by using the hand as a vaginal plug. With the help of an assistant the child's head was then brought over the pelvic brim, where it soon "fixed," and labour setting in strongly the case proceeded without further complication, until the head of the child which, in the course of a couple of hours had advanced to within sight of the vulva, was seen to make no further progress in spite of vigorous pains. On further examination, the head, and in fact the whole child, was felt to be unusually large: so the forceps were applied, and, with considerable difficulty, the head was delivered, the obstruction to its delivery being due, not to its large size, but to impaction of the shoulders over the pelvic brim. The child's neck was very short, and when the head was delivered it could not be drawn sufficiently away from the vulva to admit of a hand being passed in order to relieve the obstruction higher up. Obviously the child had been dead for a week or more, so I proceeded to decapitate. After decapitation, on passing up a hand I found an excessively large pair of shoulders impacted firmly in the pelvic brim. The taking down of both arms, and the application of powerful traction, permitted the child to be

delivered as far as its nipples, but no amount of pulling would make it advance any further. Evisceration was deemed necessary, so after emptying the thoracic and abdominal cavities by traction the child was extracted as far as its umbilicus. At this point it again became impacted. Plainly it was seen that the breech was jammed in the pelvic brim, and was about to give trouble, as it was unusually large, so I considered it advisable to cut the child across as high up as I could reach in the vagina, and, having done so, pressed up the remainder of the infant into the uterus, brought down both legs, and effected delivery by vigorous traction. The placenta was adherent, and required manual removal. There was considerable hæmorrhage, but it was easily controlled. The child, without thoracic or abdominal viscera, weighed 12½ lbs. It seems to me to be just possible that there may have been some connection between the parametritis following her last pregnancy, and the hydramnios with death of the fœtus complicating this one.

Ten days later the patient left hospital quite well.

THE LEISURE PROBLEM.

In a letter to the General Secretary of the Social Institutes Union, Sir Oliver Lodge, D.Sc., LL.D., F.R.S., Principal of the University of Birmingham, says :—"The idea of Social Institutes for recreation and utilisation of leisure ranks among the most hopeful methods of attacking the forlorn gambling and excessive drinking habits of this country. It is an indirect method of attack, and therefore wise. Compulsory closing of doors is no remedy, so long as an open longing to enter them remains. It is the will and the habits that must be amended : it is the leisure hours that must be otherwise provided for. The way to expel a bad spirit permanently is to occupy his place worthily ; and until homes are more home-like, and rational family life more possible, Social Institutes and Clubs, not too narrowly or over-governed, must supply the deficiency. These places should be self-governed as far as possible, and should be made sufficiently attractive to give the hand worker something to look forward to at the end of his day's toil ; something that will refresh and interest him and give him something to think about during another day. Otherwise life gets too monotonous, the artificial zest of gambling is resorted to, self-consciousness grows too much of a burden, and—as in China, so, alas, in Britain also—relief is sought by bewildering and stupefying that splendid instrument the human brain—the product of æons of evolution—by excess of alcoholic or other drugs."

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LIQ. COLCHICINÆ SALICYLATIS.

Lumbago — GOUT — Rheumatism.

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It is impossible to get the same results with Colchicum Wine and Salicylic Acid.

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Each fluid drachm contains $\frac{1}{32}$ grain of Salicylate of Colchicine.

HOPKINSON'S LIQUOR COLCHICINÆ SALICYLATIS (Baiss Brothers and Stevenson, Ltd., 4, Jewry Street, London, E.C.)—For the treatment of that elusive condition called gout no drug is so uniformly successful as colchicum. Every practitioner knows that success is not invariable, and, we think, for reasons not so obscure as may be imagined. In the first place the corm, or seeds, does not contain a constant proportion of alkaloid, and the method of extraction is not always equally efficient. No doubt standardisation will improve matters in the future, but we think the best means of securing the proper action of the drug is to administer the active principle—the alkaloid-colchicine. Hopkinson's Liquor Colchicinæ Salicyl contains $\frac{1}{32}$ of a grain of the salicylate of colchicine in a drachm. This is not a mixture of salicylic acid with the alkaloid, but a definite chemical compound GIVING RESULTS MUCH MORE CERTAIN THAN THOSE OF ANY PREPARATIONS OF COLCHICUM. For gout, chronic rheumatism, and rheumatoid arthritis it is a valuable acquisition, especially as it does not interfere with the action of the kidneys and liver, and does not produce any depressing effect. The liquor is a convenient and elegant preparation. "*Medical Review.*"

DOSE.—A TEASPOONFUL DILUTED, TWICE A DAY BETWEEN MEALS.

PRESCRIBE—Liquor Colchicinæ Salicyl (Hopkinson's).

TESTIMONIALS.

EASTWOOD, April 29th, 1893.

DEAR SIRS,—I have now prescribed your **Liquor Colchicinæ Salicyl** for several months **with marked effect in every case.** Before it was brought under my notice in the *Lancet*, I never prescribed the ordinary remedies with any confidence. Your spécialité, however, gives me the utmost satisfaction, and I can confidently recommend it to my brother practitioners. It has no depressing effect on the heart.

I am, dear Sirs, yours faithfully,

—— ——, M.R.C.S., ENG.

PLEASLEY, MANSFIELD, May 18th, 1893.

GENTLEMEN,—I have much pleasure in testifying to the great benefit I have experienced from the use of your **Liquor Colchicinæ Salicyl** in my own case for lumbago. During the 18 months I have used it (for three separate attacks) it has **not failed me once.** I have **always experienced relief** within half-an-hour of the time of taking the first dose, and three or four doses have invariably succeeded in subduing the attack, and that without causing any unpleasant effect whatever, or even necessitating confinement indoors. I regard it as a valuable remedy for this and similar complaints. I shall take care to have it by me for personal use, and shall prescribe it to my patients.

Yours faithfully,

—— ——, M.B., C.M. (Univ. Aberd.)

GREAT GRIMSBY.

DR. SMITH would be much obliged if Messrs. Hopkinson & Co. will send him, for his own use, another bottle of **Liquor Colchicinæ Salicyl. He has derived great benefit from it.**

LONDON, W., May 15th, 1893.

DEAR SIRS,—I have found your **Liquor Colchicinæ Salicyl** of great value in my own case. I was soon quite relieved from pain, after having been ill for a long time with rheumatic gout. I have prescribed and recommended it to a great many people since, **and have heard good results in every case.**

Yours truly,

—— ——, F.R.C.S., ENG.

Extract from the "BRITISH MEDICAL JOURNAL."

"A preparation which is said to be very successful in the treatment of Chronic Rheumatism, Gout and Lumbago, is prepared under the name of **Liquor Colchicinæ Salicyl** (Hopkinson); 60 minims diluted contain $\frac{1}{3\frac{1}{2}}$ of a grain of Salicylate of Colchicine.

OLDFIELD, BATH, 22nd, Dec., 1897.

I have chosen a good opportunity for a trial of your **Liquor Colchicinæ Salicyl. The beneficial effect was almost instant** and yet was enduring. There was no nausea.

PLYMOUTH, 15th Jan., 1902.

Liquor Colchicinæ Salicylatis has recently given **very good results** in a troublesome case of gout, which had been under the usual treatment for some weeks. It has answered admirably in my hands, I shall always use it.

LONDON, 26th May, 1902.

Thanks for **Liquor Colchiniæ.** I have taken two doses and can now walk properly, which I have not been able to do for about a month.

Mist. Bismuthi Aromat. (BAISS)

THIS valuable remedy has been much appreciated by the Medical Profession, for the past 32 years. It is useful for Dyspepsia, Gastric Distress, Impaired Digestive Powers, and Gastrodynia. It is an elegant compound, very palatable, *retained by the most enfeebled patient*, and has no precipitate. The component parts are on every label—it is no secret formula. Each teaspoonful contains 1½ minims Acid Hydrocyanic B.P., $\frac{1}{32}$ grain Morphia, 6 minims Tinct. Nucis Vom. with Bismuth, in its most efficacious form and Chloroform.

Dose.—One fluid drachm.

Sold in 1 lb. bottles 4/-, 2 lb. bottles 7/9, 4 lb. bottles 15/- each.

PRESCRIBE—Mist. Bismuthi Aromat. (Baiss.)

Mist. Bismuthi Aromat c Pepsin.

(BAISS)

Is identical with above preparation, with the addition of 2 grains Pure Pepsin Porci in each fluid drachm.

Dose.—One fluid drachm.

Sold in 1 lb. bottles 4/6, 2 lb. bottles 8/6, 4 lb. bottles 16/- each.

EXTRACT FROM THE "PRACTITIONER," July, 1903.

"The Treatment of Gout in its various forms,"

By A.-P.-L., M.D., BSc., F.R.C.P., etc.

"As regards the use of lithium-salts in the treatment of gout, my opinion is that they are not so useful as the potassium- and sodium-salts. The lithium-salts have not the same inhibiting effect on the conversion of gelatinous sodium biurate into the crystalline form as the potassium-salts have, while at the same time they have no better solvent effect on gouty deposits. The great objection, however, to the use of the lithium-salts is their greater toxicity and depressing action on the heart as compared with the potassium-salts. They consequently have to be given in such small doses that I am very doubtful as to whether in such doses they possess any remedial effect at all. On the other hand, I constantly meet with patients suffering from cardiac depression as the result of the excessive and continued consumption of lithia-tablets, which are so persistently, so speciously, and so wrongly vaunted as curative of gout.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

The Rheumatic Diseases. By. J. Odery Symes, M.D. (Lond.); D.Ph., M.R.C.S., L.R.C.P.; Assistant Physician and Bacteriologist, Bristol General Hospital. London and New York: John Lane. 1905. 8vo. Pp. x + 233.

This neat volume is the first of a series of *Practitioners' Handbooks*. The type and paper deserve all praise, and these are items which necessarily tell year after year more effectively with the over-read reviewer. The first feature of the text which arrested our grateful attention was the section which deals with the bacteriology. It made us sensibly conscious of the fact that we have lived into a new scientific era! It is surely one of the most striking of bacteriological triumphs this of being able to add rheumatism to the domain of its "Imperialism." Not that the mutual relationship of the parasitic colonist and its alien conqueror have as yet been definitely and permanently outlined. No, not by any means perfectly just yet. But there is little chance of the former receiving any definite share in the "Home Rule" of its invaded territories in the future. Regarding the present state of this department of our scientific knowledge we are told that "Achalme, Thiroloix, Bettencourt, and Hewlett have described a spore-bearing anaerobic bacillus as the exciting cause of acute rheumatism, but their conclusions have not been generally accepted, nor have their results been substantiated by subsequent observers. Many workers have found cocci in the exudations, and some have formulated the theory that acute rheumatism is an attenuated pyæmia. Chief among these is Stengel. There is, however, a preponderating weight of experimental evidence in favour of the view that the specific organism of rheumatic fever is a diplococcus which is

"There is now a sufficient mass of evidence to enable us to state that this form of arthritis is caused by a general systemic invasion by the gonococcus, and that it is not to be regarded merely as an attack of rheumatism complicating gonorrhœa, or as a pyæmia due to one or more of the many other pyogenic organisms present in the urethral discharge." Of the intimate nature of scarlatinal rheumatism our knowledge is, of course, less clearly defined—in presence of the fact that "We have not at the present time any exact knowledge of the bacteriology of scarlet fever." A strange fact, we may remark, parenthetically, in presence of the almost dazzling illumination of most of the previously dark places of the arcana of disease and its origins, which has been so demonstratively effected by the scientific host of trained bacteriologists during the past quarter of a century! In presence of this occluding veil, Dr. Symes is obliged to decide that "we must regard scarlatinal arthritis as one of the direct consequences of scarlatinal toxin."

The advice and directions given in each chapter under the heading of "treatment" are, we consider, characterised throughout by sound sense and discretion, as well as up-to-date knowledge of scientific theory and clinical practice. Taken as a whole, accordingly, we regard Dr. Symes's text-book as an excellent mirror of the present state of our knowledge of rheumatism.

Folia Hæmatologica: Internationales Zentralorgan für Blut- und Serumforschung, herausgegeben und redigirt von Artur Pappenheim. Berlin: Hirschwald. London: A. Owen & Co. [An International Reference Journal for Studies relating to the Blood and Serum.] Vol. I. No. 1. Jan., 1904. (To appear monthly.)

We heartily welcome this new periodical for blood-investigation. Owing to an oversight it has not hitherto been noticed in our pages. So complex and specialised has its subject become during the last few years that the moment seems to have arrived when, without a systematic attempt to collect and co-ordinate the numerous contributions to

our knowledge in this particular department, it would be almost impossible for anyone to keep his reading on a level with the progress of science. Few men could be in a better position to make this systematic attempt than Dr. Pappenheim, whose name is already well known through his important researches on the mode of formation of the blood corpuscles and the structure and formation of the bone-marrow. In furtherance of his object, Dr. Pappenheim has associated with himself most of the workers of recognised eminence in this department. Amongst the names mentioned on the title-page we observe those of Professors Muir (Glasgow), Sherrington (Liverpool), Drs. Goodall and Gulland of Edinburgh, and Dr. Gustav Mann of Oxford; whilst American aid is forthcoming from Ewing of New York, and Thayer, Cabot, and Simon of Baltimore. With such assistance the editor's task ought not to be a difficult one! Yet, when we glance at the programme he has sketched out for his journal we feel that, however great may be the energy of his *collaborateurs*, his labours are likely to weigh heavily on his shoulders. The subject is to be split up into the following subdivisions:—

I. (*a.*) Blood-staining.

I. (*b.*) Normal and pathological morphology and genealogy of the red and white blood-corpuscles.

II. General cellular morphology of inflammation and suppuration.

III. (*a.*) Histology and function of the blood-forming organs.

III. (*b.*) Pathology and therapeutics of the so-called blood-diseases as well as of the hæmorrhagic diatheses.

IV. Clinical hæmatology, hæmocytological diagnosis.

IV. (*a.*) The blood in various diseases, intoxications, and therapeutical (medicamentous and physical) procedures. The leucocytoses.

IV. (*b.*) Methodology and technical mechanics of clinical blood-examination.

V. (*a.*) Physiological and pathological chemistry and physics of the blood and its pigment.

V. (*b.*) The doctrine of internal secretion and auto-

intoxication, chemistry of the sexual contradictories (*Chemie der geschlechtlichen Gegensätze*). Local and general organotherapeutics (iodothyrin, adrenalin, spermin, oöphorin). function of the thyroid gland, adrenals, hypophysis; pathology and therapeutics of Graves's disease, Addison's disease, myxœdema, sclero-derma, acromegaly, osteomalacia, eclampsia, and allied conditions.

V. (*c.*) Clinical and forensic demonstration of the blood.

VI. (*a.*) Animal parasites of the blood.

VI. (*b.*) The bacteriæmias, bacteriological blood-examination, and sero-diagnosis.

VII. Immunity, serology, and phagocyte theories.

The result of this minute sub-division is that those interested can at once ascertain whatever is new in any particular direction.

We can truly say that, having carefully scanned the contents of the first number, we are of opinion that the principle of a sub-division has stood the test, and will prove very convenient. We cannot conclude this notice without heartily congratulating Dr. Pappenheim, not only on the inspiring style of his introductory remarks, but also on the very clear, and, for that reason, most valuable, paper on "The Theoretical Foundation of the Modern Doctrine of Immunity" which, in conjunction with Dr. Pröscher, he has written for the first number.

We wish him every success in his arduous and useful enterprise.

The First and Second Reports of the Advisory Board for Army Medical Services on the Treatment of Venereal Disease and Scabies in the Army.

These Reports were printed for His Majesty's Stationery Office by Eyre & Spottiswoode, printers to the King's Most Excellent Majesty, and may be purchased, either directly or through any bookseller, from Eyre & Spottiswoode, East Harding Street, Fleet Street, E.C., and 32 Abingdon Street, Westminster, S.W., or Oliver &

Bond, Edinburgh, or E. Ponsonby, 116 Grafton Street, Dublin. Price one shilling and sixpence first report, and two shillings second report.

The first report deals with recent publications on the treatment of venereal diseases and scabies in the army. It occupies 85 folio pages, to which an appendix of some ten pages is attached, of official instructions regarding procedure in cases of syphilis, and charts illustrating the relative prevalence of syphilis in the British forces in India and elsewhere, and contrasting the apparent effects resulting from the application and suspension of the C. D. Acts. The report on the treatment of venereal diseases has been compiled from official documents and current literature on the subject. A table is given comparing the incidence of venereal diseases in European armies, from which it appears that those of Germany and France suffer much less than those of other nations, while the army of Great Britain is conspicuously the most seriously afflicted by these affections. The measures adopted for prophylaxis in Germany and France are no doubt a potent factor of the comparative immunity enjoyed by their soldiers. It is noteworthy that they include lectures given to the men, instructing them in the nature and danger of venereal diseases, recommending continence, and advising them to report sick early, and no punishment is awarded unless the disease is concealed. To enlighten the minds of the soldiers as to the gravity and danger of contracting venereal diseases must commend itself to anyone of intelligence as more calculated to exercise a preventive influence than any other prophylactic measure short of the actual suppression of prostitution. The portion of the first report dealing with the treatment is much too comprehensive for it to be dealt with in detail in a notice of this sort, but it is very exhaustive, and weighs the advantages and disadvantages of the different methods in a concise and practical manner.

The second report contains the evidence given by no less than twenty-eight witnesses, comprising a number of senior members of the R. A. M. C., and also civilian ex-

perts, elicited in their answers to 12 stated questions. As might be expected, there is some difference of opinion, but, on the whole, the evidence given is a most valuable record of the conclusions arrived at by men of the largest experience and best qualified to assist the Board in fulfilling its object, and we will look forward with interest to the publication of the third report, which will, no doubt, contain the fruit of its labours.

If the final report is furnished with a complete alphabetical Index of the contents of the whole series, so as to facilitate reference to the evidence and recommendations contained in them, these reports will constitute a very valuable addition to the literature on the subject of venereal diseases.

What Venereal Diseases Mean and How to Prevent Them. Five Lectures given at the University of Copenhagen by Erik Pontoppidan, Dr. Med. and Chief Physician to Western (Lock) Hospital, Copenhagen; Member of the Danish Dermatological Society. Translated from the Danish by W. Jessen. London: John Bale, Sons & Danielsson, Ltd. Pp. 79.

These lectures were given for the first time under the auspices of the International Conference pour la Prophylaxie Sanitaire et Morale in 1899, and later on in the autumns of 1900, 1901, and 1902. The author states that they are published now, partly in response to requests from various quarters, and partly because he considers the period of private initiative has passed. The delivery of these lectures by Professor Erik Pontoppidan in the University of Copenhagen to an audience of students, not specially medical students, but students belonging to all the faculties, and the speaking to them about the significance and prevention of venereal diseases was a first step on a nearly untrodden road. Among the preventive measures recommended at the International Conference for the Prophylaxis of Syphilis and the Venereal Diseases, held in Brussels in 1899, first and foremost was a general dissemi-

nation of knowledge and information regarding the significance and prevention of these diseases. It is pointed out that one of the chief influences rendering this public danger difficult to cope with is undoubtedly the ignorance of the public concerning these evils, owing to the systematic reserve in which they are shrouded. "To be forewarned is to be fore-armed," and it is upon this maxim that Professor Pontoppidan has acted in the wise conviction that to educate the youth of all classes to realise the personal dangers and far-reaching evils consequent upon contracting venereal disease must largely tend to prevent them from exposing themselves to such risks. He points out that in *la goutte militaire* of the young lieutenant is to be found the pro-genitrix of the urinary and bladder troubles in after-life of the captain and the colonel, and how a gonorrhœa neglected in early youth is the too common, although unsuspected, cause of having a sickly wife and a childless married life.

The author brings forcibly before us the widespread and far-reaching evils arising from syphilis, not only to those who have acquired it by their own indiscretions. He gives statistics, showing that in some communities, while only ten per cent. of the population acquire this disease, 90 per cent. suffer from *syphilis insontium.*

The spread of information upon these significant truths is a step in the right direction, and the example set by Professor Pontoppidan is one which commends itself to the consideration of the authorities of all institutions for the education of young men, and, indeed, to all governing bodies, and we are glad to know that a system of instruction of the kind is contemplated in the British army, and is already in force in that of France.

Materia Medica, Pharmacology, and Therapeutics, Inorganic Substances. By CHARLES D. F. PHILLIPS, M.D., LL.D. (Abdn. and Edin.); F.R.S. and F.R.C.S. (Edin.). Third Edition. London, New York, and Bombay: Longmans, Green & Co. 1904.

THIS useful volume, which was first published in the year

1882, and was again produced as a second edition in 1894, is dedicated to Sir Thomas R. Fraser, to whose ability and research the world of Medicine owes so much. In the third edition the work has been almost entirely re-written, especially in the sections on oxygen, nitrous oxide, baths and waters, arsenic, silver, iron, mercury, &c., and observations have been made on such new departures as the use of cacodylates, glycerophosphates, and uranium: antitoxin for diphtheria and tetanus; open air for tuberculosis: radiant heat and light for rheumatism, lupus, &c., as well as accounts of recent work on the physiological action of drugs.

Although alphabetical order has, on the main, been adopted in arranging the work, in the clinical division, the non-metals have been placed before the metals, which are placed after the acids. There is a special index of diseases and remedies, and the volume ends with an index of spas and waters. The work is one of high merit, and may be read with advantage by the qualified as well as the unqualified student of medicine.

First Annual Report of the Henry Phipps Institute for the Study, Treatment, and Prevention of Tuberculosis. A Brief Account of the work of the First Year and a Reprint of the Lectures delivered under the auspices of the Institute during the year. Published by the Henry Phipps Institute, 238 Pine Street, Philadelphia. 1905. Royal 8vo. Pp. 265.

This is a brief account of the work of the first year, and a reprint of the lectures delivered under the auspices of the Institute during the year ended February 1st, 1904.

The Henry Phipps Institute was founded on February 1st, 1903, and was incorporated on September 1st, 1903. The purposes of the Institute, as set forth in its charter, are:—"The study of the cause, treatment, and prevention of tuberculosis, and the dissemination of knowledge on these subjects; the treatment and the cure of consumptives. The benefits shall be administered without regard to race, creed, or colour."

The Report commences with a description of the development of the work, giving statistics of the occupation and previous history of the patients treated, &c. The next section treats of the autopsy work. The laryngological work is then dealt with, and this is succeeded by an account of the neurological work of the Institute. There is a special report on the coloured patients of the Institute, and a chapter entitled "A Statistical Study of Tuberculosis in Philadelphia from 1861 to 1903 (inclusive)" is well furnished with diagrams and tabular statements for the purposes of illustration and explanation. The opening sentence of this contribution reads as follows:—"Tuberculosis, a contagious, preventable disease, has decreased in Philadelphia far beyond the expectations of those who are interested in the subject." This gratifying information is full of encouragement, conveyed as it is by the hand of a master of the subject. It must also prove a healthy stimulus to the further efforts of the philanthropic members of the staff of the Institute.

Saranac Lake and its history of tuberculosis is discussed by Edward L. Trudian, M.D., in a special chapter which is illustrated by photographs.

The next lecture is by William Osler, M.D., on the home in its relation to the tuberculosis problem. G. Sims Woodhead, M.D., follows with his views on the morbid anatomy and histology of pulmonary tuberculosis in relation to its general pathology and clinical manifestations.

The administrative control of tuberculosis is the subject-matter of a lecture delivered by Hermann M. Biggs, M.D. The Report concludes with a dissertation on the specific therapy of tuberculosis, and vaccination against the disease by Edoardo Maragliano, M.D.

Patients were seen on the day after the foundation of the Institute (Feb., 3, 1903), and the story of its evolution from a four-story building with a small three-story back building, which "had been put up for lodge purposes, but had been unoccupied for some years," is "here given for the purpose of showing how inexpensively and

easily an old building can be transformed into a fairly good modern hospital in a short time, and how easy it is in any community to make provision for the treatment of the consumptive poor without waiting until a great deal of money is at hand and ideal conditions present themselves."

The pages of this volume bear ample and eloquent testimony to the encouraging results which have crowned the labours of the staff of the Henry Phipps Institute in the first year of its existence.

A Reference Hand-book for Nurses. By Amanda R. Beck, Graduate of the Illinois Training School for Nurses. Philadelphia and London: W. B. Saunders & Co. 1905.

The history given by the authoress of the genesis of this very neat, and exceptionally well-filled little volume, is so very interesting, and contains so excellent a lesson in the very best methods of the acquisition—and cultivation and transmission—of knowledge, that we recommend it to the attention of all our readers. It is as follows:—"As a probationer doing class work and hospital work, and as a graduate trained nurse, I took notes of all the various formulæ, directions, &c., that might at some time be useful to me in the pursuit of my duties. My class work was productive of many valuable items of information; these and such other items as I gathered in the course of my hospital work and while on private duty, and others which were the result of my own experience and observation, I kept in a memorandum book, which soon became indispensable to me, and which I used until the leaves became worn and fell apart. I wrote this memorandum book three times, and the task of its fourth re-writing made me wish that I had its contents in a form more easily preserved. The inspiration followed that my notes in book form would be of general use to most nurses and of some use to many physicians. This little volume is the result. To my own notes, all of which have been submitted to competent authorities for

criticism, I have added several articles by eminent physicians and superintending nurses, which tend to round out the usefulness of the book. I have kept in mind, however, my original intention of producing a handbook of convenient size for quick reference."

We consider that the sketch of her methods thus drafted by the talented authoress constitutes the most perfect programme which we have hitherto happened to meet with of the steps which should lead to the growth of a really useful text-book, and the stages through which its development should be conducted before its final introduction to the outer world. And it (almost necessarily) follows that the resulting volume before us is the very best of the—now almost countless—text-books for the special use of nurses which fate and duty have called us to examine.

Health and Disease in Relation to Marriage and the Married State. A Manual contributed to by Privat-dozent Dr. med. G. Abelsdorff; Privat-dozent Dr. med. L. Blumreich; Privat-dozent Dr. Phil. R. Eberstadt; Geh. Med.-Rat Prof. Dr. A. Eulenburg; Geh. Med.-Rat Prof. C. A. Ewald; Geh. Med.-Rat Prof. Dr. P. Fürbringer; Hofrat Prof. Dr. med. M. Gruber; Dr. med. W. Havelburg; Geh. Med.-Rat Prof. Dr. A. Hoffa; Prof. Dr. med. et phil. R. Kossmann; Geh. Med.-Rat Prof. Dr. F. Kraus; Dr. med. R. Ledermann; Med.-Rat Dr. A. Leppmann; Geh. Med.-Rat Prof. Dr. E. v. Leyden; Prof. Dr. med. E. Mendel; Dr. med. A. Moll; Geh. Med.-Rat Prof. Dr. A. Neisser; Geh. Med.-Rat Prof. Dr. J. Orth; Dr. med. S. Placzek; Prof. Dr. med. et phil. C. Posner; Privat-dozent Dr. med. P. F. Richter; Prof. Dr. med. H. Rosin; Dr. med. W. Wolff. Edited by Geh. Medizinalrat Prof. Dr. H. Senator and Dr. med. S. Kaminer. The only Authorised Translation from the German into the English Language by J. Dulberg, M.D., of Manchester, England. Vol. II. London: Rebman, Ltd. 1905.

This volume completes a work of which we noticed the first instalment several months ago. The pagination is

continuous with that of the former, and the last numbered page here is 1257. The index begins on page 1217, so that it occupies 41 pages—a very desirable feature in a work which includes so many interesting subjects and items, especially when treated by various contributors. The sections of this volume deal with "Gonorrhœal Diseases in Relation to Marriage," "Syphilis in Relation to Marriage," "Diseases of the Skin in Relation to Marriage," "Diseases of the Organs of Locomotion," "Diseases of the Eyes, with especial Regard to Heredity," "Diseases of the Lower Uro-genital Organs and Physical Impotence," "Diseases of Women, including Sterility," "Diseases of the Nervous System," "Insanity in Relation to Marriage," "Perverse Sexual Sensations and Psychical Impotence," "Alcoholism and Morphinism in Relation to Marriage," "Occupational Injuries in Relation to Marriage," "Medico-Professional Secrecy in Relation to Marriage," and—last of all—"The Economic Importance of Sanitary Conditions." Such a selection of topics—dealing as they do with a very large proportion of the subjects which are most intimately connected with the home life of the individual and the public life of the community and the nation, with the material prosperity and the spiritual advancement of the various items of the human race in all parts of the world—cannot fail to present matters of the highest and most absorbing interest to every member of the medical profession; and, we may well add, to every philosophic philanthropist and every progressive politician. Hundreds of questions will here be found fully and luminously expounded, the systematic suppression or passive ignorance of which has, most assuredly, been among the most fertile sources of backsliding from spiritual progress in the past, as well as of the much-talked-of "physical deterioration" of the opening years of the twentieth century. In an age of (enforced) education of all classes of the community, and of democratic distribution of power, such discussions can no longer be neglected, and can no longer be held exclusively *in camerâ*. In a civilised community where every man has a vote, it is

much better that he should be trained how to use it to the best advantage, of the community and of himself. The knowledge contained in these volumes will enable the medical man to convey more instructive advice to his clients than he could probably have done without them—except at the trouble and cost of years of special research.

The Historical Relations of Medicine and Surgery to the End of the Sixteenth Century. An Address delivered at the St. Louis Congress in 1904. By T. Clifford Allbutt, M.A., M.D., Hon. M.D. (Dubl.), Hon. LL.D. (Glasgow), Hon. D.Sc. (Oxf. and Vict.), F.R.C.P., F.R.S., F.L.S., F.S.A.: Regius Professor of Physic in the University of Cambridge: Fellow of Gonville and Caius College; Hon. Fellow Royal College of Physicians of Ireland, and of the New York Academy of Medicine. London: Macmillan & Co., Ltd. New York: The Macmillan Company. 1905.

This extremely interesting and instructive little volume marks another of the successful stands which Professor Clifford Allbutt has made against the mostly continuous ebb of the literary prestige of our profession during the past couple of generations. Indeed, all through the scientific nineteenth century—from almost its beginning, but more especially during its latter (more purely mechanical) half—the subsidence of the medical profession in the scale of literary accomplishments forms one of the incontestible and conspicuous facts of the social history of European civilisation. For many centuries before the nineteenth the medical profession in England ranked almost with the clerical in literary accomplishments. This is saying as much as could well be said, as the clerical profession of the centuries from the fifteenth to the eighteenth represented the highest landmark of the English intellect. And, during those very ages, the literary—prose and poetic—culture of the medical profession bade a fair rivalry to that of the clerical, while it far surpassed that of the legal. At the same time, the culture and advancement of science emanated almost exclu-

sively from our ranks. The exquisite prose and poetic diction of our own countryman, Oliver Goldsmith, still remains, and most assuredly will for ever remain, unsurpassed in English literature for clearness of expression, purity of taste, and perfection of artistic finish. Akenside, Cowley, and Garth secured for themselves permanent niches in the temple of poetic fame in an age which boasted of a preponderance of luminaries whose glare would have effectually extinguished those of any glimmering lights of questionable magnitude. Arbuthnot shone, even in the presence of Pope and Swift. We need not impress upon any reader of the English language the literary merits of Smollett. Even the ponderous epics of Blackmore display culture, if not genius. The botanical genius of Erasmus Darwin, physician, natural philosopher, and versifier, inspired some of the (deservedly) most popular poetry of his generation; in which the readers of the present day can see enshrined some of the very best "evolutionary" ideas of his famous grandson. Robert Glynn, M.D., carried off the Seatonian prize in 1757, and became for a time a recognised leader in the production of religious poetry.

The commandments of prosody were always carefully conned by the aspiring medico of those ages; no candidate for a university degree could afford to ignore any facts or fancies connected with *quantity*. For the thesis for the M.D. of any university had to be composed in Latin, and read by the candidate. This classical taste was often assiduously cultivated by physicians in the depths of the country, who had many off-duty hours on most days. Dr. Johnson—who was by no means given to unmeaning flattery—found data for a high estimate of the classical and literary culture of the medical profession of his time. But half a century or so later, we find Johnson's biographer, Elwin, giving—in his capacity of editor of "The Quarterly"—a woefully different account. He found medical contributors to his review an unattainable item. "It is rare," he wrote to his predecessor, Lockhart, "to meet with one of them who has the slightest idea what style is." And what

shall be said in future generations of the average medical culture of the present day? There is no echo available; so we must only withdraw the query. Not long ago we read, somewhere, somebody's suggestion that the best consolation for the existing state of things is to recollect that probably we could have retained the culture of Aikin and Akenside only at the cost of still abiding under their therapeutic methods. This suggestion involves the collateral assurance of the vast inferiority of the latter, which some sceptical spirits of the present day might possibly call in question.

Whatever view may be held regarding the relative values of the clinical methods of the old centuries and the new, and the presence and absence—conscious or unconscious—of literary and artistic tastes and attainments in the medical profession, the small volume before us may be taken as absolute proof that the co-existence of medical skill, scientific attainment, and literary culture must be regarded as a possibility of the twentieth century; even if Professor Clifford Allbutt has but ever so few contemporaries who, like himself, have reached the highest grade in all three.

First Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. By the Director, Andrew Balfour, M.D., B.Sc., M.R.C.P. Edin.; D.P.H. Camb.; Fellow of the Royal Institute of Public Health; Member of the Epidemiological Society; Medical Officer of Health, Khartoum, and Sanitary Adviser to the Sudan Civil Medical Department. Khartoum: Department of Education, Sudan Government. 1904.

The initial instalment of the work of the Research Laboratories of the Gordon College—whose equipment was the generous gift of Mr. Henry S. Wellcome to the Sudan Government—is a gratifying (and æsthetically) instructive one. It contains 84 beautifully-printed quarto pages, and deals with "Mosquito Work," "Biting and Noxious Insects other than Mosquitos," "Insects and

Vegetable Parasites Injurious to Crops," "Cyanogenesis in Sorghum Vulgare," "General Routine Work," "Eosinophilia in Bilharzia Disease and Dracontiasis," and "The Mosquitos of Egypt, the Sudan, and Abyssinia." The illustrations are numerous and well selected. Those of the insects are extremely well depicted in their natural colours. The Sudanese mosquitos, whose prospect of survival has now become so very precarious, are beautifully represented here. Future generations of scientific entomologists may find life-like impressions in these pages, when the philanthropic hygiene which has now been inaugurated will have wiped all the living originals off the face of the earth! The report before us is an excellent account indeed of the insect enemies of the dweller in North Africa, and the means which he may utilise for their destruction.

We cordially congratulate Dr. Balfour and all others concerned in its production on the way in which their task has been fulfilled.

Les Infections à Trypanosomes au Congo, chez l' Homme et les Animaux. [Trypanosoma-Infections on the Congo in Man and the Lower Animals.] By A. Broden, Director of the Bacteriological Laboratory of the Association of Colonial Studies at Leopoldville (Congo State). [Extrait du Bulletin de la Société d'Études Coloniales, Février. 1904. Bruxelles.]

This is a pamphlet of about 30 pages, containing (*a*) an account of three cases of the above infection in Europeans; (*b*) a reference to a number (not stated) of cases observed by the author amongst the indigenous population; and (*c*) a description of (1) a case in the ox (with subsequent experimental transference to the goat); (2) two cases in the sheep (with experimental transference to the monkey (Macacs) and guinea pig); (3) a case in the ass. The *post-mortem* appearances of the affected animals and the characters of the trypanosomes are carefully recorded. Although the paper does not contain any novel observations, it must be regarded as a valuable contribution to

the literature of this kind of parasitism. It is illustrated by 11 well-executed pen-and-ink sketches of several sorts of trypanosomes as seen under a magnification of 1,200 diameters.

The Principles and Practice of Asepsis. By Arthur Styles Vallack, M.B. and Ch.M. (Sydney); L. M. (Rotunda); Surgeon to the Berrima District Hospital, New South Wales. London: Baillière, Tindall & Cox. 1905. Pp. 95.

Dr. Vallack in this little book aims at describing a practical and efficient system of asepsis. "Every surgical procedure," he states, "is a bacteriological experiment, whether the surgeon chooses to call it one or not," and aseptic surgery requires, not an adherence to mere ritualistic practices, but "a just appreciation of the exact reason for every action, however apparently trifling it may be."

The three objects which the surgeon seeks to attain are:—

1. To introduce as few organisms into the wound as possible.

2. To avoid the introduction of germs of high virulence.

3. To maintain the resisting powers of the tissues at as high a standard as possible.

Dr. Vallack considers that the majority of surgeons, while attending more or less strictly to the first rule, do not devote the attention to the second and third which they merit. He insists on the uselessness of chemical antiseptics in aseptic surgery, except in the preparation of the skin, their action in lowering tissue vitality more than neutralising their antiseptic effect, and cites the important distinction which should be made between the inhibition and the destruction of bacteria, as exemplified by the difference which exists between cultivation experiments and inoculation experiments. He exposes the fallacy of conclusions based on negative results obtained by cultivation experiments on culture media with minute

pieces of epidermis removed from the hand, and concludes that the only way to avoid the risks of wound infection by the hands of the surgeon or his assistants is the systematic use of sterilised rubber gloves—not only when operating, but also, and perhaps more especially, while dealing with septic conditions. We do not like Dr. Vallack's method of suturing sterilised napkins to the edges of operation wounds. We think the procedure unnecessary, while, to some extent, it must hamper the surgeon in his work.

The book is simply written and concise. It should prove useful to those who wish to learn the views relative to asepsis held by modern surgeons, who have achieved by means of it results unattainable by purely antiseptic methods.

The Sanitary Inspector's Handbook. By Albert Taylor, Member of the Royal Sanitary Institute; Holder of the Inspector of Nuisances' Certificate of the Sanitary Institute; late Demonstrator to the Students of the Sanitary Institute; Sanitary Inspector of the City of Westminster; late Chief Sanitary Inspector to the Vestry of St. George, Hanover Square, London; formerly Chief Inspector of Nuisances, Wigan; and Sanitary Inspector, Wallasey. Fourth Edition, with Illustrations. London: H. K. Lewis. 1905. Pp. 455.

Mr. Taylor has served as Sanitary Inspector in many parts of England, and has brought to the production of this volume his varied knowledge and ripe experience.

Were proof needed of the great value of his work it would be found in the fact that it has now reached its fourth edition. The sanitary officer will find in it a useful guide to the many duties which now devolve upon him, while he will receive from its study many hints which will aid him in his work. Probably the portions of the book which are of most value are those which deal with Acts of Parliament and Local Government Board regulations and model by-laws dealing with sanitary administration in England and Wales, Scotland and

London. The special provisions which are applicable to Ireland have been ignored, and this mars to some extent the usefulness of the book to Irish readers.

The chapters on house sanitation are well written and practical. We observe that the large diagram of the pan closet, which figured in former editions, has disappeared, and trust that this indicates that that most objectionable contrivance is nearing extermination.

The chapter on infectious diseases and disinfection needs amplification. We have not found any mention of Esmarch's method of disinfection as used in Berlin, in which lumps of bread, forty-eight hours old, are used for rubbing down the walls and ceiling of the room to remove the dust, the walls being subsequently sprayed with $2\frac{1}{2}$ to 5 per cent. solution of carbolic acid. Tuberculosis is touched on in dealing with the subject of slaughter-houses and meat inspection, but we think mention might have been made of methods by which the sanitary inspector in his daily rounds can aid in the prevention of consumption, and of the London County Council's By-Laws relative to spitting in public places.

There are omissions in the book, but Mr. Taylor has covered a wide field, and there is a great deal of useful information put into 455 pages, much of it being of a kind which it would be difficult to obtain elsewhere without considerable trouble.

RADIUM RAYS IN HYDROPHOBIA.

ACCORDING to despatches from Milan, Professor Tizzoni, of Bologna, has succeeded in curing rabies in animals by means of exposure to radium. After injecting into rabbits virulent hydrophobia virus, he subjected them periodically for several days to the influence of radium rays. The rabbits thus treated were, he declares, all cured, while others, likewise inoculated, but not subjected to the cure, died of hydrophobia. A pinch of salt, as well as of radium, is indicated here.—*Medical Record*, New York, June 17, 1905.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—Sir Thornley Stoker, M.D., F.R.C.S.I.
General Secretary—James Craig, M.D., F.R.C.P.I.

SECTION OF STATE MEDICINE.

President—Sir John W. Moore, M.D.
Sectional Secretary—F. C. Martley, M.D.

The President in the Chair.

Friday, April 14, 1905.

Asylum-Dysentery.

Professor E. J. McWeeney showed a large series of cultures of an organism which he had isolated by the Drigalski plate-method from the muco-purulent stools of a typical case of this disease. He also showed, for purposes of comparison, parallel cultures of genuine typhoid, and of two strains of *B. coli*, one derived from human stools, and highly pathogenic for rabbits; the other freshly cultivated from a pure water-supply, and presumably non-pathogenic. The dysentery organism was thus shown to have the closest cultural resemblance to the typhoid, the chief morphological difference being its non-motility. The chief cultural differences appeared on Endo's fuchsin-medium and in mannite agar. Exhibitor discussed the question as to the identity of the organism isolated by him with that of Shiga and Kruse. He expressed his thanks to Dr. Hefferuan, Assistant Medical Officer at the Clonmel District Asylum, to whom he was indebted for the material.

The President thanked Professor McWeeney for his very interesting exhibit, which treated of a subject of the greatest importance to workers in Preventive Medicine. He hoped that

during the coming summer Dr. McWeeney would devote some study to the bacteriology of the diarrhœal diseases of children, as he thought it probable that some, at least, of these cases were due to the presence of the bacillus of dysentery described by Shiga.

Dr. A. R. Parsons expressed the hope that Dr. McWeeney would be able to keep a strain of this micro-organism growing, so that other cases of asylum dysentery might be tested against it. He thought that it was very probable that in the future the treatment of dysentery would largely depend on the bacteriological diagnosis.

Case of Poisoning by Carbon Monoxide.

Dr. W. J. Thompson described a case which was unusual, in that the gas poisoning was contracted not by inhaling ordinary coal gas, but by being in a small room ($17 \times 8 \times 7$ feet) with a smouldering fire. It took place on one of the dredgers belonging to the Port and Docks Board. The patient was admitted to Jervis Street Hospital on the 12th of Nov., 1904, at 7.30 a.m.; he was in a state of deep coma, and of a dusky, dark-greyish colour; the respirations were short, shallow, and stertorous, about 24 per minute; the pulse small and thready; the first sound of the heart lost; the pupils irregular; the surface of the body cold, and the abdomen retracted; there was also suppression of urine.

He was treated by hypodermic injections of digitalin, strychnin, and ether; by continued artificial respiration with inhalation of oxygen; by blood-letting, and by the application of heat to all parts of the body.

The blood when drawn off had the characteristic bright red colour of carbon monoxide poisoning.

The patient regained consciousness towards evening, and left the hospital in fifteen days perfectly well.

On the first day he passed only nine ounces of urine, on the second fifteen ounces, and on the third twenty-three ounces, and afterwards the normal quantity; no sugar or albumen was detected, and the amount of urea per ounce was normal.

Professor McWeeney stated that he had made an examination of the blood from Dr. Thompson's patient. The first specimen he examined was too small in amount for detailed examination, but presented all the appearances of the presence of CO gas combined with the hæmoglobin. At a subsequent examination no trace of CO gas was found, and the leucocyte count was also normal. Dr. McWeeney thought that Dr. Thompson deserved the greatest credit for his active and successful treatment of the case.

Dr. Thompson replied.

Strychnin Poisoning.

Dr. W. I. de C. Wheeler gave a short account of a case of strychnin poisoning which had come under his notice.

SECTION OF PATHOLOGY.

President—H. C. Earl, M.D., F.R.C.P.I.
Sectional Secretary—A. H. White, F.R.C.S.I.

Professor E. H. Bennett in the Chair.

Friday, May 5th, 1905.

Fractures of First Costal Cartilage.

Professor E. H. Bennett presented a note on fracture of the cartilage of the first rib, illustrated by the exhibition of some six specimens of the injury. He dwelt particularly on the fact that in a majority of the cases the individuals had been females not likely to have been during life engaged in very heavy labour such as might be assumed to cause new or false joints in the cartilage, and that the recent fractures corresponded in all pathological details with fractures of the cartilages lower down in the chest.

Dr. T. G. Moorhead asked how frequently Prof. Bennett had found a false joint, and also whether he had ever found a synovial cavity.

Prof. Bennett replied by showing a specimen which illustrated an attempt at the formation of a false joint.

Anomaly of Cardiac Valve.

Dr. Moorhead exhibited a case of anomaly of the mitral valve. On the ventricular aspect of the large anterior cusp a small foramen with smooth edges was present which led into a sac about $\frac{1}{3}$rd inch in diameter. The site and appearance suggested a valvular aneurysm, but the presence of muscular tissue in the wall, the absence of fibrin and the smooth endothelial lining, precluded that view.

Tuberculous Disease of Cæcum, Appendix and Ileum.

Dr. R. Atkinson Stoney showed a specimen of above removed by operation from a female of 23 years of age. A tumour was found in the right iliac fossa, freely movable towards the middle line, to a less extent in an outward direc-

tion, but not either upwards or downwards. Patient complained of chronic constipation and occasional colicky pains. There was marked hyperæsthesia of the 11th dorsal area of the right side. At operation a thickened band was found round the ileum, one and a half inches from the cæcum. The cæcum itself was large, nodular, and thickened. The diseased parts were removed and a lateral anastomosis was performed. On opening the specimen a stricture of half an inch in diameter was found in the ileum, the cavity of the cæcum was almost obliterated, and a second stricture was found in the commencement of the colon, with a diameter of a third of an inch. No ulceration of mucous membrane was found macroscopically, and the specimen was thought to be malignant. Some glands were found enlarged behind the cæcum. When examined microscopically both the tumour and the glands were found to be infected with typical tubercle.

Dr. W. J. Thompson said the specimen was unusual and interesting, and congratulated Mr. Stoney on the successful result of the operation.

Dr. Kirkpatrick said that during the past winter session he had seen two cases of tubercular disease of the cæcum, both successfully treated by operation. In one case, after removal, the specimen was considered to be malignant, and it was only after very careful microscopic examination that the diagnosis was finally established. This bore out what Mr. Stoney had said. He thought the conditions could not be so rare as Mr. Stoney would lead them to believe, as this was the third specimen he himself had seen during one winter session.

Mr. Stoney, in replying, said that he was sorry he had given the impression that tubercular disease of the cæcum was a rare condition. Indeed two London surgeons had lately published the results of eighty-four cases.

Recrudescent Ulceration of Stomach.

Dr. W. J. Thompson stated that the specimen exhibited was taken, *post-mortem*, from a patient, aged 29 years, clerk by occupation, who was admitted to Jervis Street Hospital on the 21st of February last. He had contracted syphilis five years ago, and for two or three years previously had been drinking heavily. While under specific treatment for about one year he ceased taking alcohol. Since then he drank freely. During the past six months he lost flesh rapidly. Physical examination showed

the heart to be enlarged and organically diseased; also enlarged liver, dilated stomach, peripheral neuritis and albuminuria.

At the *post-mortem* examination the stomach was found enlarged, with a well-marked contraction near the pylorus. On opening it there were seven ulcers (two as large as a sixpence) in the region of the pylorus. These ulcers were on the cicatrices of two very large ulcers.

Prior to death, patient showed practically no sign of gastric ulceration.

Congenital Sarcoma of the Eyelid.

Mr. Arthur Benson and Dr. H. C. Mooney showed a tumour removed from the upper eyelid of an infant 17 days old. It was then the size of a small walnut. There was no family history of any form of malignant growth in either parent. At birth it was the size of a split pea, situated in the centre of the left upper eyelid. It was darkish in colour, and somewhat resembled a hæmatoma. It changed little for a week, and then grew rapidly. It was lobulated, very elastic in feel, and had entirely lost its dark look, and more resembled a cyst in feel and appearance. Three weeks afterwards recurrence took place in the neighbourhood of the wound; also over the malar bone and in the orbit. A second operation failed to eradicate it, and a sub-maxillary gland enlarged, also one in the axilla. The orbital tumour was, after three months, the size of a small potato, and similar in character to the original growth removed.

Sarcomata of the eyelid, they said, were rare, and congenital unpigmented carcinomata of the eyelid had not before come within their knowledge.

The tumour, irregularly oval, measured 25mm. × 20m. × 15mm. On section it was creamy white, with small signs of vascularity. The skin removed with the tumour was non-adherent, and under the microscope showed no signs of infiltration. Sections of the tumour showed nothing unusual—it was a mixed-celled, non-pigmented sarcoma with few blood vessels, but with a fair number of large dilated empty spaces, the walls of which seemed to be composed of the compressed surrounding tumour cells. Primary sarcoma of the lid is rare, about fifty cases having been reported, many of which were pigmented. As far as can be ascertained this case is the only one of congenital sarcoma of the lid recorded.

Dr. W. J. Thompson said he had seen the case shortly after birth. The tumour looked then like a small hæmatoma. The skin over it was freely movable, and its base seemed firmly attached to the eyelid. For a week afterwards there was no advance in size, and then it began to grow rapidly.

SECTION OF OBSTETRICS.

President—A. J. Smith M.B., F.R.C.S.I.
Sectional Secretary—T. Henry Wilson, F.R.C.P.I.

Friday, May 26, 1905.

The President in the Chair.

Specimens.

The President (Dr. A. J. Smith)—An ovarian cyst which illustrates grave complications.

Dr. E. H. Tweedy asked Dr. Smith what method he adopted to separate the intestinal adhesions from the tumour, and what method he adopted to prevent the injured intestines from again becoming glued together

Sir A. V. Macan thought the suturing of the hole in the bladder an interesting point.

The President, replying, said that as to the method of separating the adhesions, part of the specimen showed portion of the cyst wall which was taken away where it had to be split down. As to the prevention of adhesions, there was a large area of intestine stripped of peritoneum, and he had to put in a number of very fine purse string sutures in parts which appeared dangerous; the omentum, which was very long, was also used to cover them. He found that the single purse string suture closed up the large hole in the bladder very completely on inverting the edges.

Dr. E. Hastings Tweedy showed a ruptured uterus.

Sir A. V. Macan said that personally he criticised "shock" very severely. It might occur, but his interpretation of it was sepsis. It did not depend on mere tearing of the lower uterine segment even with opening the peritoneum, else why was it not caused in operating. The woman was a long time in labour, and the rupture took place some time before admission, so he did not find much difficulty in regard to causation of infection. He remembered a case in the Rotunda of the "rubbing through" variety. There was an anterior displacement, pendulous

abdomen, and the head wore through into the peritoneum. The patient was a long time in labour, and the rupture must have taken place a long time before she showed symptoms of shock. There must have been a subsequent infection. As to the treatment, if the child could be taken out per vias naturales, of course that should be done. If you could stop the hæmorrhage, and the case was not septic, it seemed unnecessary to open the abdomen. If the child had escaped into the abdominal cavity it seemed more rational to open the abdomen, and stitch up the rupture, or remove the uterus.

Dr. R. D. Purefoy said that, personally, he found no difficulty in explaining the causation of shock, apart from the supposition of sepsis. In many recorded cases death occurred a short time after the rupture, and shock must have played a large part in bringing about a fatal issue. The fact of the child being in the peritoneal cavity would account for a good deal of shock. He could not follow Dr. Tweedy's explanation of how these ruptures occurred, and thought that the old theory of the stretching of the lower uterine segment by the active upper segment was sufficient. He thought the pressure of the presenting part had been directed backwards, and, during uterine action, the strain was brought against the posterior part of the uterus. As to treatment, he thought they had abundant evidence to show that no law could be laid down as to whether plugging or laparotomy was better.

Dr. Jellett thought it was not possible to say definitely that there was no such thing as shock. He went on to relate some experiments performed on animals by Crile in America which went to show that death might result from (*a*) heart failure, when death could be averted by cardiac stimulants. (*b*) There were also cases in which the peripheral arterial resistance had entirely disappeared, due to vasomotor paralysis.

The President said there was a good deal in what Sir Arthur Macan had said as to the non-causation of shock by operations which involved opening the abdomen, &c. He thought that septic trouble was largely at the bottom of these cases.

Discussion on the Report of the Rotunda Hospital.[a]

Dr. Jellett said he had to congratulate Dr. Tweedy on his first report. He saw that a certain proportion of deaths had occurred in excess of what would probably occur in future

[a] This Report will be found in Vol. CXIX., p. 401.

years, but most of them were due to causes which were outside the control of the Master. He would specially like to congratulate him on the steps which he had taken to prevent the recurrence of sepsis, as he had introduced many important reforms, such as rubber gloves, finger stalls, separate utensils for each patient, &c. Going on to criticise the report seriatim, he referred to the fatal case of accidental hæmorrhage, and asked Dr. Tweedy how it was that because the membranes ruptured while the plug was being removed he did bipolar version? Had the adoption of this treatment any relation to the theory of compression of the uterine artery which Dr. Tweedy brought forward to explain the action of the vaginal tampon in accidental hæmorrhage? Personally, he did not think that the circulation in the uterine artery could be impeded by a vaginal tampon, nor did he think the application of a bullet forceps and pulling down the cervix could exert any pressure on the uterine artery. He considered that Dr. Tweedy's theories that one could bring down the angle of the uterine artery within reach of a plug was fantastic, since when a vaginal tampon was put in, and a binder applied outside, the uterus was compressed between the two, and did not change its position. Did Dr. Tweedy still hold to his theory? He criticised the arrangement of the Rotunda Reports, saying that he had had occasion to read up many of them to compile statistics, &c., and found it very annoying when there was always a different arrangement or no arrangement at all. It was very difficult to collect information from a whole series of them, as the subjects did not follow one another in a systematic order, and he thought the Reports would gain enormously in value if Dr. Tweedy would classify his subjects in a systematic order and record them in the same way through his whole Mastership.

Sir A. V. Macan congratulated Dr. Tweedy on his report. He noted the enormous increase there was in the number of cases, and this was very striking. An interesting point also was the efforts made to combat sepsis. Personally he would think the important thing would be first to make a thorough investigation as to where the fault lay. He agreed with Dr. Jellett as to the value of the improvements. He did not consider rubber gloves of such great importance, and could not regard the stoppage of sepsis as being due to those measures. Rubber gloves were the fashion, but he himself did not consider them at all essential. As to the use of antiseptic dressings, he did not think

their outward application to the vulva could be very important in parturition; if it was, the matter had been very insufficiently provided for by nature. He thought there should be free drainage for the lochia. As to the maternity mortality, he still regarded the first case as having died from accidental hæmorrhage, and if plugging took so long to apply that a woman could collapse we should at once go back to Cæsarean section. It failed in its object if it could not be applied quickly, and you could leave it, and say it had stopped the hæmorrhage. He quite agreed with Dr. Tweedy about the abandonment of curettage, and thought it was quite time to give it up. He, like Dr. Tweedy, had been disappointed in the antistreptococcic serum, and to be of any use it would have to be a mixed one. Crédé's ointment might turn out to be of use. With regard to the treatment of eclampsia, the simpler the treatment was the better, and if we agreed with regard to the injection of large doses of morphin, why wash out the stomach also? He said he had seen a case in which hebotomy was performed, and it seemed to him immeasurably superior to symphysiotomy. The only objection seemed to be that a hæmatoma might form.

Dr. R. D. Purefoy said he would like to congratulate Dr. Tweedy on his clearness in enunciating his opinions and his courage in defending them. With regard to some of the new measures, he might say that during his Mastership separate utensils were in use, and sterilised dressings for the vulva had been prepared and were partly in use. He was still a believer in the use of the flushing curette in suitable cases. He said he was at a loss to know what was the contra-indication to which Dr. Tweedy referred. The subsequent treatment of these cases was douching the uterus, and constitutional treatment. Dr. Tweedy stated, page 404, that "the majority of cases, no doubt, get well . . . yield readily to any form of treatment." He thought this a very sweeping statement, and was not prepared to admit that most of the cases were merely sapræmic. During his Mastership one of his assistants, Dr. Lloyd, prepared a series of cases of rise of temperature in which bacteriological and microscopic examinations were made of the contents of the uterus, taken with every necessary precaution, and in most of the cases the examination was made by Dr. Earl. Out of 130 cases 73 had streptococci. He believed that the curette, when used in time, removed most of the organisms, and the patient was then able

to resist the small dose which reached her circulation, therefore, he was not prepared to give up the flushing curette. He would also like to know what were the dangers which Dr. Tweedy believed followed from its use. The report also said:—"If the bacteriological report has been productive of positive results the inside of the uterus is explored by means of a gloved forefinger in order that pieces of retained placenta, membranes, or old blood clot may be removed if any such should be present." That was a very mild proceeding judging by the description of it. With the flushing curette the amount of pain was very slight and shock to the patient absolutely absent. In the proceeding advocated the patient was anæsthetised, the hand was passed into the vagina, there was the shock to the patient, the opening up of the innumerable vents after parturition, the vagina was distended and air freely admitted, a number of avenues for infection made or opened up, and then the finger was passed into the uterus. Besides, he did not believe that the finger would remove the debris in the same short space of time as the curette. The Master urged against the curette that in the two cases in which it was used it failed. That was possible; it sometimes might fail, but the risk in skilled hands was infinitesimal. He thought that the risks of the curette were infinitely magnified by the new method. He was glad to find the Master had not lost faith in constitutional treatment; but why did he recommend mercurial inunction? As to the use of serum, he also had come to the conclusion that it was perfectly useless. He thought the case of accidental hæmorrhage was very interesting. It demonstrated the use of the plug and binder, but also the utter unsuitability of version in these cases. He was also glad to see that the Master had continued the use of Bossi's dilator in helping delivery and in inducing labour. As to the use of the bullet forceps in plugging the vagina, he had never heard of its being done, and he would not do it. In his time, after manual removal of the placenta, there was seldom a rise of temperature. As to rubber gloves, he did not use them himself. He differed strongly from Dr. Tweedy's plan of a "repeated introduction of the gloved hand into the uterus." Surely one ought to do it with as few introductions as possible and without removing the hand if possible. With regard to the treatment of eclampsia, he thought the practice of passing fluid into the stomach a very valuable one, but he considered the statement—p. 414—"Neither vapour baths . . . objection-

able effects" was a very sweeping one. What were the objectionable effects of a vapour bath? He knew of no drawbacks to it. He had always condemned the use of pilocarpin. Again, Dr. Tweedy differed from most authorities as to the wisdom or otherwise of hastening labour in these cases. He himself did not think that labour should be induced if the convulsions had come on, but otherwise he thought that labour should be assisted. He noticed in the Report that practically there was very little information about the extern maternity.

Dr. Smyly congratulated Dr. Tweedy on his most interesting and excellent report. He had made many changes, and he thought they were all improvements. Rubber gloves were of great use, and especially in handling anything that was septic. The using of sponge holders by the nurses when washing the vulva was also of importance. The statement that there were only three cases of mastitis out of over 1,800 deliveries was different from his experience in his own private practice, and he thought that it was caused in nearly all cases by the nurses, who frequently contaminated their hands when washing the patient, and then infected the nipple, and mastitis was brought about.

Dr. Horne, referring to the question of mastitis, said that these cases occurred usually in the second or third week, and after the patient had left hospital, so that probably many returned to the extern department. He congratulated Dr. Tweedy on his report. It was interesting to see that notwithstanding all the advances that had been made a certain proportion of cases did suffer from various forms of puerperal trouble.

The President was glad to see that rubber gloves were used, and thought them a great step in advance. On the question of reckoning morbidity, he thought there should be a uniform standard on the Continent and here, and he considered the German method a good one, and it should be adopted. He congratulated Dr. Tweedy on his very excellent report.

Dr. E. H. Tweedy, in replying, said he first had to thank the members for the way in which they had received his report. Replying to Dr. Jellett, he said the question of the arrangement of the report did not occur to him, and he would be very glad to follow out any suggestions that Dr. Jellett had to offer as to the future arrangement. Dr. Jellett differed from him on the question of plugging the uterus for accidental hæmorrhage, and, as to the first case, Sir Arthur Macan had objected to his

having taken out the plug. This treatment was comparatively new, and he lacked the courage of his convictions. He was now more firmly convinced than ever as to its efficacy, and believed that the plug stops the hæmorrhage immediately. He thought the case exceptional, and had taken out the plug to see if bleeding still continued, and whilst doing so the membranes ruptured. It was then perfectly easy to turn, and he did it instinctively. He still did not know of what the patient had died. Sir Arthur Macan had said that there was no necessity for completely isolating the patients, but he must remember that the beds, mattresses, &c., could not be rendered surgically clean. In a series of four cases of infection which had occurred it was traced to the pan used for catching the antiseptic lotion with which the patients were washed, and it was the only utensil in common use among them. The fact remained that the moment they began to boil the bed chambers, &c., and isolate the patients, the septic condition ceased. The aseptic dressings to the vulva might not be necessary, but were certainly expedient. In dealing with morbidity, he said that no morbidity was ever based on a first twenty-four hours' rise of temperature, and nothing else. A temperature of 100.4° was the basis of the morbidity standard of many of the Continental clinics, but with us 100.8° had marked the limit until lately. A serious condition of septic disease could not exist with a pulse of 90 or below it. He would certainly like to see a common standard adopted. He attached importance to the temperature and pulse taken in conjunction, as the one was a check on the accuracy of the other. He considered that in giving morphin in eclampsia, 2 grains in the 24 hours was plenty. He agreed with Dr. Purefoy and Dr. Jellett that all the so-called improvements were in process of introduction when he went into the Rotunda—it was simply a matter of evolution—but he took exception to the statement that separate utensils were in use, as they were changed from one bed to another and from one patient to another. As to sepsis, Dr. Lloyd had counted 130 cases of poisoning of the uterus, with 73 cases of streptococcus poisoning. He thought that that was very high. Dr. Williams, of America, once held that streptococci were very common in the vagina, but he had since said he had pushed in the germs from the vulva, and this was what probably happened to Dr. Lloyd, and he did not think that anyone would admit the accuracy of Dr. Lloyd's 130 cases. As to the description that Dr. Purefoy had given of his efforts to remove a piece of placenta in the case alluded to,

the uterus had been previously curetted by an assistant-master trained in curetting by Dr. Purefoy. Dr. Lloyd's statistics and Dr. Purefoy's belief in the curette were at variance with the very latest statistics. The serious dangers from curetting were thrombosis and rupture of the uterus. One might curette away the softened muscular tissue as he had seen done. The case, also, that Dr. Purefoy referred to was not an ordinary case—she was in a very bad condition, and had been previously curetted. As to passing the hand frequently into the uterus, he did not believe that anyone could say that the uterus was empty so long as there was anything in his hand. Sensation was abolished if he had anything in his fingers, and it was infinitely more important to take away everything than to exclude air germs. He had never seen bad results from putting the hand in frequently. As to the use of vapour baths, everyone knew they were most depressing, and eclamptic women died from heart failure. Dr. Smyly had fallen into an error in stating that only one case of mastitis was recorded in this report. He again thanked the members very much for their reception of his report.

THE SPIROCHÆTE PALLIDA.

In a leading article on "Syphilis and its Cause: a new Outlook," the *Medical News* (New York) of June 17, 1905, observes:—"Some two or three years ago we learn that Bordet and Gengou observed in the plasma of a syphilitic chancre a spiral micro-organism, but failing to subsequently confirm their findings, nothing was said concerning it. Recently, however, as outlined by Flexner and Noguchi, a number of observers have substantiated the finding of a spiral bacterium brought into prominence by Schaudinn and Hoffmann, and named by them *Spirochaete pallida*. The corroboration by Metchnikoff and Roux, in their artificial syphilides in apes, and the present confirmation by the workers in the Rockefeller Institute, makes it appear that a new micro-organism has been found, and that it is possible that it may prove to be the specific organism of syphilis."

RECLAMATION.

Intra-muscular Injection of Mercury in Syphilis.

To the Editor of the DUBLIN JOURNAL OF MEDICAL SCIENCE.

DEAR SIR,—I must ask you to allow me to call attention to a printer's error in the formula for the preparation of Lambkin's Cream, as given in the Journal of May, in my paper upon intra-muscular mercurial injection.

The amount of 2 per cent. parolein carbol. should read ʒv. and not ʒi.

The correct formula is as follows :—

Hydrargyri, - - -	ʒi.
Adipis lanæ anhydrosi, - -	ʒiv.
Parolein carbol. (2 per cent.), -	ʒv.

As cream compounded according to the erroneous formula would be dangerously strong, your readers should be cautioned in having it prepared to be careful to use the formula as it appears at page 26 in Colonel Lambkin's book and not as stated in my paper.

I send you my original manuscript to inspect, from which you will see the error was merely a printer's one.

Yours faithfully,

H. FITZGIBBON, M.D.

[The error was no doubt a printer's one in the first instance, but it escaped both the Author and the Editor in the correction of the proofs for press.—ED., D. J. M. S.].

SANITARY AND METEOROLOGICAL NOTES.

Compiled by the EDITOR.

VITAL STATISTICS

For four weeks ending Saturday, May 20, 1905.

IRELAND.

TWENTY-TWO TOWN DISTRICTS.

THE average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ending May 20, 1905, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 19.6 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,093,959. The deaths registered in each of the four weeks ended Saturday, May 20, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000 :—

TOWNS, &c.	Week ending				Average Rate for 4 weeks	TOWNS, &c.	Week ending				Average Rate for 4 weeks
	April 29	May 6	May 13	May 20			April 29	May 6	May 13	May 20	
22 Town Districts	21.8	20.2	21.7	19.6	20.8	Lisburn -	27.3	18.2	18.2	9.1	18.2
Armagh -	—	41·2	27.5	27.5	24.0	Londonderry	22.3	11.2	19.8	17.4	17.7
Ballymena	9.6	28.7	14.4	4.8	14.4	Lurgan -	22.1	17.7	8.9	31.0	19.9
Belfast -	23.7	19.2	19.3	17.9	20.0	Newry -	16.8	16.8	8.4	12.6	13.7
Clonmel -	30.8	15.4	10.3	10.3	16.7	Newtownards	34.3	17.2	5.7	51.5	27.2
Cork -	19.2	22.6	20.5	24.7	21.7	Portadown	25.8	10.3	25.8	15.5	19.4
Drogheda -	4.1	16.3	16.3	16.3	13.3	Queenstown	19.8	—	52.7	13.2	21.4
Dublin (Reg. Area) -	21.9	22.0	23.7	19.5	21.8	Sligo -	19.2	19.2	86.3	28.8	38.4
Dundalk -	16.0	8.0	19.9	16.0	15.0	Tralee -	21.1	21.1	10.6	10.6	15.9
Galway -	54.4	42.7	31.1	15.5	35.9	Waterford	11.7	27.3	29.2	27.3	23.9
Kilkenny -	19.7	29.5	9.8	14.7	18.4	Wexford -	14.0	14.0	28.0	32.7	22.2
Limerick -	17.8	12.3	19.1	27.3	19.1						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases, registered in the 22 districts during the week ended Saturday, May 20, 1905, were equal to an annual rate of 1.0 per 1,000, the rates varying from 0.0 in twelve of the districts to 8.9 in Lurgan—the 7 deaths from all causes in that district including one from whooping-cough and one from enteric fever. Among the 123 deaths from all causes in Belfast are 4 from measles, one from pyrexia (origin uncertain), one from enteric fever, and one from diarrhœa.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock, and Kingstown. The population of this area is 378,994, that of the City being 293,385, Rathmines 33,203, Pembroke 26,025, Blackrock 8,759, and Kingstown 17,622.

In the Dublin Registration Area the births registered during the week ended May 20 amounted to 236—111 boys and 125 girls; and the deaths to 149—69 males and 80 females.

Deaths.

The deaths registered represent an annual rate of mortality of 20.5 in every 1,000 of the population. Omitting the deaths (numbering 7) of persons admitted into public institutions from localities outside the area, the rate was 19.5 per 1,000. During the four weeks ending Saturday, May 20, the death-rate averaged 24.9, and was 4.4 below the mean rate for the corresponding portions of the ten years 1895-1904.

The registered deaths (149) include 2 deaths from measles, one death from whooping-cough, and 3 deaths from diarrhœal diseases—2 deaths were attributed to influenza. In the 3 weeks preceding, the deaths from measles had been 2, 3, and 4; and the deaths from diarrhœal diseases had been 3, 1, and 3, respectively.

There were 2 deaths from lobar pneumonia, and 3 each from broncho-pnuemonia and *pneumonia* (not defined).

The total number of deaths from tuberculosis (all forms of) was 28. This number includes 3 deaths from tubercular phthisis, 15 deaths from *phthisis*, 4 deaths from tubercular meningitis, one death from tubercular peritonitis, and 5 deaths from other

forms of the disease. In the 3 weeks preceding, the deaths from all forms of tuberculosis had been 31, 36, and 32, respectively.

Carcinoma caused 2 deaths, sarcoma caused one death, and 3 deaths were due to *cancer* (undefined).

The deaths of 2 infants, prematurely born, were registered.

Of 22 deaths caused by diseases of the brain and nervous system, 13 were attributed to *convulsions*, and included in the latter were 12 deaths of infants under one yeare of age.

There were 19 deaths from diseases of the heart and blood vessels, and 17 deaths from diseases of the respiratory system—included in the latter were 14 deaths from bronchitis.

Of 5 deaths from accidental causes, 2 were caused by sewer gas, and one was that of a child of 2 years of age from scalds.

In 10 instances the cause of death was "uncertified" there having been no medical attendant during the last illness. These cases include the deaths of 6 children under one year of age and the deaths of 3 persons aged 60 years and upwards.

Fifty of the persons whose deaths were registered during the week were under 5 years of age (37 being infants under one year, of whom 14 were under one month old), and 39 were aged 60 years and upwards, including 23 persons aged 70 and upwards, of whom 4 were octogenarians, and 2 (a man and a woman) were stated to have been aged 90 and 104 years, respectively.

The Registrar-General points out that the names of the cause of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1899," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; Mr. Manly, Executive Sanitary Officer for Pembroke Urban District: Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; Dr. Byrne Power, Medical Superintendent Officer of Health for Kingstown Urban District; and Dr. Whitaker, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended May 29, 1905, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Small-pox	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Continued Fever	Typhoid or Enteric Fever	Erysipelas	Puerperal Fever	Varicella	Whooping cough	Cerebro-spinal Fever	Total
City of Dublin	April 29	–	*	*	9	–	–	4	–	–	4	16	–	*	*	*	33
	May 6	–	*	*	5	–	–	2	–	–	5	9	–	*	*	–	21
	May 13	–	*	*	6	–	–	1	–	–	4	11	–	*	*	–	22
	May 20	–	*	*	4	–	–	–	–	5	4	14	–	*	*	*	27
Rathmines and Rathgar Urban District	April 29	–	*	*	–	–	–	–	–	–	1	–	–	*	*	*	1
	May 6	–	*	*	–	–	–	–	–	–	1	2	–	*	*	*	3
	May 13	–	*	*	–	–	–	–	–	–	2	–	–	*	*	*	2
	May 20	–	*	*	1	–	–	–	–	–	–	–	–	*	*	*	1
Pembroke Urban District	April 29	–	2	–	2	–	–	–	–	–	1	–	–	*	–	–	5
	May 6	–	5	–	–	–	–	–	–	–	–	–	–	*	–	–	5
	May 13	–	5	–	–	–	–	–	–	–	–	2	–	*	–	–	7
	May 20	–	*	–	–	–	–	–	–	–	–	4	–	*	–	–	4
Blackrock Urban District	April 29	–	*	*	–	–	–	–	–	–	–	–	–	*	*	*	–
	May 6	–	*	*	–	–	–	–	–	–	–	–	–	*	*	*	–
	May 13	–	*	*	–	–	–	–	–	–	–	–	–	*	*	*	–
	May 20	–	*	*	–	–	–	–	–	–	–	–	–	*	*	*	–
Kingstown Urban District	April 29	–	*	*	–	–	–	–	–	–	–	–	–	*	*	*	–
	May 6	–	*	*	–	–	–	–	–	–	–	–	–	*	*	*	–
	May 13	–	*	*	–	–	–	–	–	–	–	–	–	*	*	*	–
	May 20	–	*	*	–	–	–	–	–	–	–	–	–	*	*	*	–
City of Belfast	April 29	–	*	*	7	–	–	1	–	12	16	6	1	*	*	–	43
	May 6	–	*	*	12	–	–	1	3	11	26	8	–	*	*	–	61
	May 13	–	*	*	8	–	–	5	–	12	14	2	1	*	*	–	42
	May 20	–	*	*	8	–	–	2	2	8	12	9	–	*	*	–	41

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

Six cases of measles were admitted to hospital during the week ended Saturday, May 20, 1905, 11 were discharged, there was one death, and 30 patients remained under treatment at its close.

Five case of scarlet fever were admitted to hospital, 5 were discharged, and 51 cases remained under treatment at the close of the week. This number does not include 3 convalescents from scarlatina who remained under treatment at Beneavin, the Convalescent Home of Cork Street Fever Hospital, Dublin.

One case of typhus remained under treatment at the close of the week.

Five cases of diphtheria were admitted to hospital, 4 were discharged, and 13 patients remained under treatment at the close of the week.

Five cases of enteric fever were admitted to hospital, 4 were discharged, there was one death, and 23 cases remained under treatment in hospital at the close of the week.

In addition to the above-named diseases, 7 cases of pneumonia were admitted to hospital, 7 cases were discharged, and 15 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, May 20, in 76 large English towns, including London (in which the rate was, 14.1). was equal to an average annual death-rate of 14.4 per 1,000 persons living. The average rate for 8 principal towns of Scotland was 16.7 per 1,000, the rate for Glasgow being 19.4, and for Edinburgh 14.6.

Vital Statistics

For four weeks ending Saturday, June 17, 1905.

IRELAND.

Twenty-two Town Districts.

The average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ending June 17, 1905, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 18.6 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,093,959. The deaths registered in each of the four weeks ended Saturday, June 17, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000 :—

Towns, &c.	Week ending May 27	June 3	June 10	June 17	Average Rate for 4 weeks	Towns, &c.	Week ending May 27	June 3	June 10	June 17	Average Rate for 4 weeks
22 Town Districts	19.0	17.5	18.2	18.6	18.3	Lisburn -	18.2	31.8	13.6	40.9	26.1
Armagh -	13.7	6.9	–	13.7	8.6	Londonderry	19.8	17.4	9.9	9.9	14.3
Ballymena	14.4	14.4	52.7	14.4	24.0	Lurgan -	17.7	26.6	13.3	22.1	19.9
Belfast -	20.5	17.3	16.1	20.1	18.5	Newry -	16.8	21.0	12.6	25.2	18.9
Clonmel -	15.4	–	56.4	20.5	23.1	Newtownards	11.4	17.2	28.6	17.2	18.6
Cork -	16.4	14.4	21.9	20.5	18.3	Portadown -	20.7	5.2	20.7	20.7	16.8
Drogheda -	20.4	28.6	24.5	12.3	21.4	Queenstown	–	–	26.4	6.6	8.3
Dublin (Reg. Area) -	19.0	19.4	19.3	17.2	18.7	Sligo -	48.0	9.6	4.8	28.8	22.8
Dundalk -	19.9	8.0	16.0	12.0	14.0	Tralee -	10.6	10.6	10.6	21.1	13.2
Galway -	11.7	11.7	11.7	15.5	12.7	Waterford -	25.3	19.5	11.7	27.3	20.9
Kilkenny -	19.7	39.3	9.8	54.1	30.7	Wexford -	23.3	4.7	14.0	14.0	14.0
Limerick -	9.6	16.4	26.0	6.8	14.7						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases, registered in the 22 districts during the week ended Saturday, June 17, 1905, were equal to an annual rate of 1.5 per 1,000, the rates varying from 0.0 in seventeen of the districts to 22.7 in Lisburn, the 9 deaths from all causes in that district including 4 from measles and one from diphtheria. Among the 138 deaths from all causes in Belfast are 9 from measles, one from diphtheria, 5 from enteric fever, and 4 from diarrhœal diseases; and the 14 deaths from all causes in Waterford include one from typhus and 3 from whooping cough. The death from typhus registered in Waterford took place on February 11, 1905.

DUBLIN REGISTRATION AREA.

In the Dublin Registration Area the births registered during the week ended June 17, amounted to 169—83 boys and 86 girls; and the deaths to 132—59 males and 73 females.

Deaths.

The deaths registered represent an annual rate of mortality of 18.2 in every 1,000 of the population. Omitting the deaths

(numbering 7) of persons admitted into public institutions from localities outside the area, the rate was 17.2 per 1,000. During the four weeks ending Saturday, June 17, the death-rate averaged 24.0, and was 4.2 below the mean rate for the corresponding portions of the ten years 1895-1904.

The registered deaths (132) include one death from scarlet fever, one death from diphtheria, and 2 deaths from whooping-cough—one death was attributed to influenza. In the 3 weeks preceding, the deaths from whooping-cough had been one, 3, and 2 respectively.

There were 4 deaths from broncho-pneumonia and 9 from *pneumonia* (not defined).

The total number of deaths from tuberculosis (all forms of) was 30. This number included 9 deaths from tubercular phthisis, 17 deaths from *phthisis*, 2 deaths from tubercular meningitis, one death from *tabes mesenterica*, and also one death from general tuberculosis. In the 3 weeks preceding, the deaths from all forms of tuberculosis had been 41, 31, and 30, respectively.

Carcinoma caused 2 deaths, and 5 deaths were referred to *cancer* (undefined).

The deaths of 3 infants, prematurely born, were registered.

Of 12 deaths caused by diseases of the brain and nervous system, 5 were attributed to *convulsions*, all of children under 5 years of age.

There were 18 deaths from diseases of the heart and blood vessels, and 16 deaths from diseases of the respiratory system—included in the latter were 15 deaths from bronchitis.

Of 2 deaths from accidental causes, one was due to a fall from a vehicle, and one to drowning.

In 3 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the deaths of 2 children under 5 years of age, one of them being an infant under 12 months.

Twenty-nine of the persons whose deaths were registered during the week were under 5 years of age (18 being infants under one year, of whom 7 were under one month old), and 28 were aged 60 years and upwards, including 9 persons aged 70 and upwards, of whom 3 were octogenarians, and one (a woman) was stated to have been aged 92 years.

The Registrar-General points out that the names of the cause of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1899," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; Dr. Byrne Power, Medical Superintendent Officer of Health for Kingstown Urban District; and Dr. Whitaker, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended June 17, 1905, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Small-pox	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Continued Fever	Typhoid or Enteric Fever	Erysipelas	Puerperal Fever	Varicella	Whooping cough	Cerebro-spinal Fever	Total
City of Dublin	May 27	–	4	0	8	–	–	2	–	4	5	13	1	0	0	*	33
	June 3	–	0	3	5	–	–	1	–	5	8	8	–	0	0	0	26
	June 10	–	1	1	20	–	–	2	–	2	5	11	–	0	0	0	40
	June 17	–	0	1	4	–	–	2	–	4	11	8	–	0	0	*	29
Rathmines and Rathgar Urban District	May 27	–	2	0	–	–	–	–	–	–	–	–	–	0	0	0	–
	June 3	–	0	0	–	–	–	–	–	–	1	–	–	0	0	0	1
	June 10	–	0	0	–	–	–	–	–	–	–	–	–	0	0	0	–
	June 17	–	2	0	–	–	–	–	–	–	2	–	–	0	0	0	2
Pembroke Urban District	May 27	–	1	–	–	–	–	1	–	–	1	1	–	*	1	–	5
	June 3	–	4	–	–	–	–	–	–	–	–	–	–	*	–	–	4
	June 10	–	2	–	–	–	–	–	–	–	–	–	–	*	–	–	2
	June 17	–	1	–	–	–	–	–	–	1	1	–	–	*	–	–	3
Blackrock Urban District	May 27	–	0	0	–	–	–	1	–	–	–	–	–	0	0	0	1
	June 3	–	0	0	–	–	–	–	–	–	–	–	–	0	0	0	–
	June 10	–	0	0	–	–	–	–	–	–	–	–	–	0	0	0	–
	June 17	–	0	0	–	–	–	–	–	–	–	–	–	0	0	0	–
Kingstown Urban District	May 27	–	0	0	1	–	–	–	–	–	–	–	–	0	0	0	1
	June 3	–	0	0	–	–	–	–	–	–	–	–	–	0	0	0	–
	June 10	–	0	0	–	–	–	–	–	–	–	1	–	0	0	0	1
	June 17	–	0	0	1	–	–	1	–	–	–	–	–	0	0	0	2
City of Belfast	May 27	–	0	0	13	–	–	–	–	13	14	3	–	0	0	0	43
	June 3	–	3	0	10	–	–	1	–	19	22	10	–	0	0	0	62
	June 10	–	*	0	5	–	–	3	–	14	16	3	–	0	0	0	41
	June 17	–	2	0	9	–	–	5	–	23	10	11	–	0	0	0	58

Cases of Infectious Diseases under Treatment in Dublin Hospitals.

Five cases of measles were admitted to hospital during the week ended Saturday, June 17, 1905, 8 were discharged, and 11 patients remained under treatment at its close.

Thirteen cases of scarlet fever were admitted to hospital, 15 were discharged, there was one death, and 52 cases remained under treatment at the close of the week. This number does not include 19 convalescents from scarlatina who remained under treatment at Beneavin, the Convalescent Home of Cork Street Fever Hospital, Dublin.

Six cases of diphtheria were admitted to hospital, 3 were discharged, there was one death, and 15 patients remained under treatment at the close of the week.

Two cases of enteric fever were admitted to hospital, 5 were discharged, and 23 cases remained under treatment in hospital at the close of the week.

In addition to the above-named diseases, 12 cases of pneumonia were admitted to hospital, 8 cases were discharged, there was one death, and 19 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, June 17, in 76 large English towns, including London (in which the rate was 13.3), was equal to an average annual death-rate of 13.4 per 1,000 persons living. The average rate for 8 principal towns of Scotland was 15.7 per 1,000, the rate for Glasgow being 16.7, and for Edinburgh 15.2.

Meteorology.

Abstract of Observations made in the City of Dublin, Lat. 53° 20′ N., Long. 6° 15′ W., for the Month of May, 1905.

Mean Height of Barometer - - -	30.139 inches.
Maximal Height of Barometer (13th, at 9 a.m.),	30.478 ,,
Minimal Height of Barometer (1st, at 4 a.m.),	28.800 ,,
Mean Dry-bulb Temperature, - - -	53.2°.
Mean Wet-bulb Temperature, - - -	49.2°.
Mean Dew-point Temperature, - -	45.2°.
Mean Elastic Force (Tension) of Aqueous Vapour,	.304 inch.
Mean Humidity, - - -	74.9 per cent.
Highest Temperature in Shade (on 28th), -	70.9°
Lowest Temperature in Shade (on 4th), -	36.9°.
Lowest Temperature on Grass (Radiation) (4th),	32.1°.
Mean Amount of Cloud, - - -	57.0 per cent.
Rainfall (on 10 days), - - -	1.182 inches.
Greatest Daily Rainfall (on 1st) - -	.714 inch.
General Directions of Wind, - -	N.W., N.E., S.W.

Remarks.

May, 1905, was characterised by a prevalence of winds from Polar quarters. Only in the last week did an equitorial air current assert itself. The polar winds depended on the persistent prevalence of an anticyclone to the north-westward of the British Isles. The month was very dry, sunny and, accordingly, the mean temperature ranged above the normal, although for a few days after the 21st a serious plunge into winter weather was experienced. Of the total small rainfall (1.182 inches), as much as .714 inch, or 60 per cent., fell on the 1st. Absolute drought prevailed from the 11th to the 24th inclusive. The estimated duration of bright sunshine was 225 hours, compared with 195.75 hours in 1904, 178.5 hours in 1903, 178.75 hours in 1902, and 302.25 hours in 1901. The daily mean duration of sunshine was 7.3 hours, compared with 6.3 hours in May, 1904.

In Dublin the arithmetical mean temperature (54.0°) was 1.9° above the average (52.1°). The mean dry-bulb readings at 9 a.m. and 9 p.m. were 53.2°. In the forty years ending with 1904, May was coldest in 1869 (M. T. = 48.2°), and warmest in 1893 (M. T. = 56.7°). In 1904 the M. T. was 53.0°.

The mean height of the barometer was 30.139 inches, or 0.159 inch above the corrected average value for May—namely, 29.980

inches. The mercury rose to 30.478 inches at 9 a.m. of the 13th, having fallen to 28.800 inches at 4 a.m. of the 1st. The observed range of atmospheric pressure was, therefore, 1.678 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 53.2°, or 7.1° above the value for April, 1905—46.1°. Using the formula. *Mean Temp.* = *Min.* + (*Max.* — *Min.*) × .47, the value is 53.5°, or 1.8° above the average mean temperature for May, calculated in the same way, in the thirty years, 1871-1900, inclusive (51.7°). The arithmetical mean of the maximal and minimal readings was 54.0°, compared with a thirty years' average of 52.1°. On the 28th the thermometer in the screen rose to 70.9°—wind, S.S.W.; on the 4th the temperature fell to 36.9°—wind, N.N.W. The minimum on the grass was 32.1°, also on the 4th.

The rainfall amounted to 1.182 inches, distributed over 10 days. The average rainfall for May in the thirty-five years, 1866–1900, inclusive, was 2.020 inches, and the average number of rainy days was 15. The rainfall and the rainy days were, therefore, both below the average. In 1886 the rainfall in May was very large — 5.472 inches on 21 days; in 1869, also, 5.414 inches fell on 19 days. On the other hand, in 1895, only .177 inch was measured on but 3 days. In 1896 the fall was only .190 on 7 days. In 1904, 2.685 inches fell on 18 days.

A solar halo appeared on the 7th, and again on the 31st. High winds were noted on 6 days, but never attained the force of a gale. Hail fell on the 3rd. There was a slight fog in the evening of the 16th.

During the month the thermometer did not fall below 32° in the screen or on the grass. The mean minimal temperature on the grass was 42.5°, compared with 42.6° in 1904, 44.3° in 1903, 40.3° in 1902, 41.7° in 1901, 41.6° in 1900, 40.6° in 1899, 42.9° in 1898, 40.9° in 1897, 43.1° in 1896. 41.8° in 1895, and 37.6° in 1894. The maximum reached or exceeded 60° on 19 days, but never fell short of 50°. Once it exceeded 70°—namely, on the 28th, when the reading was 70.9°.

The rainfall in Dublin during the five months ended May 31st amounted to 9.026 inches on 81 days, compared with 11.741 inches on 92 days in 1904, 12.560 inches on 95 days in 1903, 9.973 inches on 81 days in 1902, 7.724 inches on 67 days in 1901, 9.921 inches on 92 days in 1900, 9.652 inches on 87 days in 1899, 10.568 inches on 84 days in 1898, 10.693 inches on 93 days in

1897, 5.971 inches on 70 days in 1896, and a thirty-five years' average of 10.140 inches on 80 days.

At the Normal Climatological Station in Trinity College, Dublin, the observer, Maurice S. Moore, returns the mean height of the barometer as 30.141 inches, the highest reading observed being 30.488 inches at 9 a.m. of the 13th, the lowest, 28.983 inches at 9 a.m. of the 1st. The arithmetical mean temperature was 53.1°, the mean dry-bulb reading at 9 a.m. and 9 p.m. being also 53.1°. Rain fell on 8 days to the amount of 1.118 inches, .710 inch being measured on the 1st. The number of hours of bright sunshine registered by the Campbell-Stokes sunshine recorder was 215.7, giving a daily average of 7.0 hours. The corresponding figures for May, 1904, were 192.5 hours and 6.2 hours.

At Knockdolian, Greystones, Co. Wicklow, the rainfall, measured by Mr. R. Cathcart Dobbs, J.P., was 1.116 inches, distributed over 8 days—.580 inch falling on the 1st. The total fall since January 1st, 1905, equals 9.611 inches on 67 days, compared with 12.027 inches on 84 days in 1904, 15.655 inches on 79 days in 1903, 11.750 inches on 68 days in 1902, 11.205 inches on 65 days in 1901, 16.381 inches on 84 days in 1900, 15.475 inches on 86 days in 1899, 12.445 inches on 78 days in 1898, 14.120 inches on 90 days in 1897, and 5.716 inches on 52 days in 1896.

Dr. Arthur S. Goff returns the rainfall at Lynton, Dundrum, Co. Dublin, as 1.42 inches on 11 days, compared with 2.46 inches on 18 days in 1904, 2.86 inches on 18 days in 1903, 3.26 inches on 22 days in 1902, and 1.09 inches on 10 days in 1901. The greatest daily measurement was .96 inch on the 1st. The temperature in the shade ranged from 75° on the 30th to 37° on the 5th and 23rd. The mean temperature of the month was 54.5°, compared with 53.3° in 1904, 53.1° in 1903, 50.5° in 1902, and 52.6° in 1901.

Dr. B. H. Steede, M.D., reports that at the Royal National Hospital for Consumption, Newcastle, Co. Wicklow, the rainfall for the month was .892 inch on 7 days, .340 inch being registered on the 1st, and .230 inch on the 28th. Since January 1st, 1905, 9.615 inches of rain have fallen at this station on 74 days. The highest temperature in the shade was 65.0° on the 18th, and the lowest was 35.0° on the 23rd.

According to Mr. Robert O'B. Furlong, C.B., the rainfall at Cloneevin, Killiney, was 1.83 inches on 9 days, compared with 2.48 inches on 15 days in 1904, 2.54 inches on 15 days in 1903, 2.58 inches on 21 days in 1902, and 1.20 inches on 10 days in 1901. The maximal fall in 24 hours was 1.13 inches on the 1st. The average rainfall in May at this station during the 20 years,1885–1904, inclusive, was 2.107 inches on 13.8 days. Since January 1st, 1905, 11.00 inches of rain have fallen at Cloneevin on 78 days.

The rainfall recorded by Miss Muriel O'Sullivan at White Cross, Stillorgan, was 1.660 inches on 9 days; the maximum in 24 hours was 1.110 inches on the 1st.

At 21 Leeson Park, Dublin, Dr. Christopher Joynt, F.R.C.P.I., measured 1.405 inches on 10 days, the largest amount recorded in 24 hours being .870 inch on the 1st.

At the Ordnance Survey Office, Phœnix Park, Dublin, rain fell on 9 days to the amount of 1.243 inches, the greatest measurement in 24 hours being .675 inch on the 1st. The total amount of bright sunshine was 225.6 hours, the largest daily amount being 14.5 hours on the 18th.

Mr. T. Bateman, of the Green, Malahide, Co. Dublin, returns the rainfall at 1.283 inches on 10 days, and the shade mean temperature at 51.5°, the extremes being—highest, 69°; lowest, 33°.

At Cork Mr. Wm. Miller returns the rainfall at 0.90 inch on 9 days, or 1.28 inches below the average. The greatest day's rainfall was 0.27 inch on the 27th. Up to May 31st, the rainfall of 1905 in Cork amounted to 15.87 inches on 88 days, or 0.91 inch above the average.

The Rev. Arthur Wilson, M.A., writes from the Rectory, Dunmanway, Co. Cork, to the effect that 1.805 inches fell there on 12 days, the greatest fall in 24 hours being 0.420 inch on the 27th. There was no rain after the 10th until the 25th, and the rainfall during the first twenty-four days was only .365 inch, of which .180 inch fell on the 1st and .130 on the 10th.

Dr. J. Byrne Power, F.R. Met. Soc., Medical Superintendent Officer of Health, Kingstown, Co. Dublin, reports that the mean temperature at that station was 53.0°, being 1.4° above the average for May during the previous 7 years. The extremes were—highest, 68.7° on the 29th; lowest, 36.0° on the 23rd. At Bournemouth the mean was 54.3°, the extremes being—highest, 75° on the 30th; lowest, 35° on the 23rd. From these particulars it will be seen that the mean temperature at Bournemouth has

already become higher than that at Kingstown. It will remain higher during all the summer, the heat meanwhile becoming considerable, and at times very oppressive at Bournemouth, while at Kingstown it will be comparatively cool. The range of temperature was 13.5°, at Bournemouth it was as much as 20.1°. The mean relative humidity was 68 per cent., being 7 per cent. less than the average for this month during the previous 4 years. The total rainfall was 1.62 inches on 9 days, of which amount 1.15 inches fell on the 1st; at Bournemouth the rainfall was 0.45 inch on 7 days. The total duration of bright sunshine was 234.8 hours, compared with 225.6 hours at the Ordnance Survey Office, Phœnix Park, 262 hours at Valentia, 216.3 hours at Parsonstown, 230.7 hours at Southport, and 287.4 hours at Hastings.

A NEW DEPARTURE IN MEDICAL EDUCATION.

The question of the concentration of the teaching of the preliminary and intermediate subjects of the medical curriculum in London at a few centres has long occupied the attention of those interested in medical education, as it has been felt that this step *must* result in greater efficiency in teaching, as well as economy in expenditure. The Westminster Hospital Medical School has been the first to take definite action in the matter, and has just completed negotiations with King's College, by which arrangements have been made for the teaching of physics, chemistry, biology, anatomy, physiology, and materia medica—(that is to say, the subjects of the preliminary and intermediate examinations) to Westminster students at King's College. Students will enter Westminster Hospital Medical School as in the past, and will remain Westminster men, and will not become matriculated students of King's College; but they will be taught the earlier subjects of study at that institution. The scheme will come into effect at the commencement of next Winter Session in October. At the same time, the Westminster School is thoroughly reorganising the teaching of the subjects of the final examination. It is believed that this commencement of a probably more general concentration of the teaching of the preliminary and intermediate subjects of the curriculum cannot but promote the best interests of Medical education in London.

PERISCOPE.

NEW PHYSICAL SIGNS IN DISEASES OF THE CHEST.

A NUMBER of new physical signs described by A. Grober (*Deutsch. Arch. für klin. Med.*, vol. 82, Nos. 3 and 4) are considered by him as far more valuable in the diagnosis of intrathoracic disease than diascopy. It is but little known that difference in the size of the pupils is a common symptom of apex tuberculosis. The pupil of the affected side is generally wider, since the sympathetic nerve is irritated by the inflamed pleura. Another valuable sign is the behaviour of the veins of the chest if an expiratory effort is made with closed glottis as in Valsalva's method. Normally, the vessels on both sides swell equally, but with tumours, aneurysms, &c., the veins which are affected by the compression will be more prominent. Normally, the pupils will contract somewhat during expiration and dilate slightly with inspiration; with Valsalva's method, there will be a gradual, slight dilatation during the deep inspiration preceding the expiratory effort, and a gradual, slight contraction during the latter. The following variations occur: (1) Only one pupil will show the normal contraction; the other will dilate. On the side of the latter, pathological esions of definite localisation will be found in the thorax. (2) If both pupils dilate instead of contracting during forced expiration, the disease is bilateral. (3) If there is a difference in the size of the pupils during normal respiration, and the dilated pupil widens still more during Valsalva's experiment, while the contracted one will become normal, intrathoracic disease on the side of the wide pupil is probable. (4) If the pupils differ in size with quiet respiration but dilate with Valsalva's method, bilateral intrathoracic affection is probable. If the smaller pupil becomes equal in size or larger than the second one, the disease probably also affects both sides, if local disease or organic disease of the nervous system can be excluded. Absence of all these phenomena does not argue against intrathoracic disease. The percussion note obtained over the manubrium sterni is also of the greatest value. In real or inflammatory tumours of the mediastinum there will often be dulness with closed mouth and dull tympany with open mouth, or dull tympany with closed mouth and Wintrich's

change of percussion with open mouth. If the posterior mediastinum is chiefly affected, the note will be purely tympanitic with closed mouth ; with distinct Wintrich's change on opening the mouth.—*Medical News.* (New York). Saturday, March 18th, 1905.

FRENCH HEALTH RESORTS.—ANNUAL VISIT OF MEDICAL MEN AND STUDENTS (VOYAGES D'ÉTUDES MÉDICALES.

ALTHOUGH we have already noticed this excursion (see the Number of this Journal for May, 1905, Vol. CXIX., page 399) the following information will be useful to our readers. This year's visit will comprise the most important stations in the Western Pyrenees. It will start from Luchon on Friday, September 1st, and terminate at Arcachon on Thursday, September 14th. The price to be paid, which includes everything between these two places, is £12. There are no extras of any kind. The travelling is by first class special train, and the accommodation is the best which each place has to offer. In order to reach Luchon, a ticket (1st or 2nd class) at half price will be issued from any selected point on French territory, and a similar reduction will be made on the ticket from Arcachon to the point of departure from French territory. The district to be visited is remarkable for its extreme beauty and interest, and the stations are famed for their therapeutic value. Among them are such well known resorts as Luchon, Cauterets, Saint-Sauveur, Eaux Bonnes, Pau, Biarritz, Dax and Arcachon, together with many of minor importance. The particular features of each place are briefly described by Dr. Landouzy, Professor of Clinical Medicine at the University of Paris. Medical men (who may be accompanied by their wives), medical women, and students in medicine are eligible to take part in the trip. Names must be sent in so as to reach Paris on or before August 15th. They should be accompanied by the subscription (£12), which may be in the form of an ordinary English cheque, payable to Dr. Carron de la Carrière, 2 Rue Lincoln, Paris ; or to Dr. Leonard Williams, 8 York Street, Portman Square, W., from either of whom any further information may be obtained.

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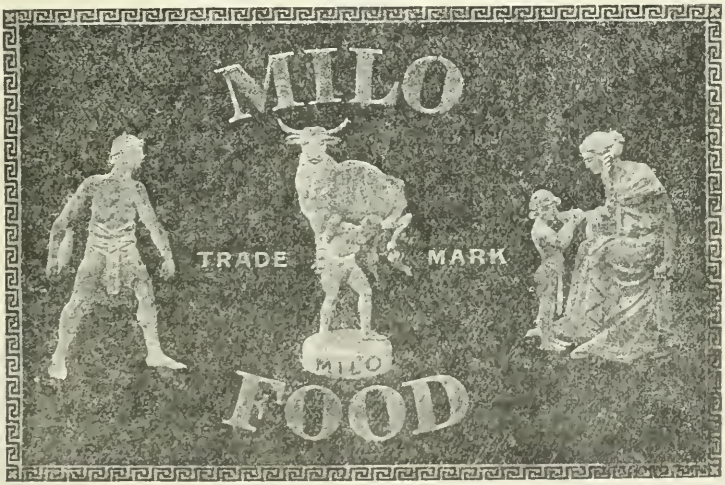

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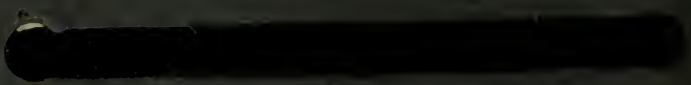
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